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Yang Xiaoji

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Abstract

Sovereign wealth funds (SWFs) have recently received increasing attention from both public and academia. Given that SWFs exist since 1950s, this recent surge of interest is surprising. Due to their large-scale and mysterious way of operation, SWFs are believed to destabilize the world's financial markets. Sovereign wealth funds as investment rookie in the world's financial market had a great impact on the structure of global capital markets, pricing decisions in stock markets and investors perception of risk. Many reports agree that sovereign wealth funds will soon become an important participant in the international captial markets and have an enormous impact on the world economy.

This Thesis is divided into six chapters. In the first chapter, I introduce the conception and the theory of SWFs. Second chapter analyses the operation and supervision mechanisms of SWFs. Chapter three discusses the main reasons of the development of SWFs. Chapter four introduces some successful examples of SWFs, including Singapore's sovereign funds, Norwegian Government Pension Fund Global, American Old Age, Survivors and Disability Insurance. Chapter five and six describe the development and the problems of SWFs in China, specifically this section offers a detailed analysis of the China Investment Corporation (CIC) establishment by integrating theory with practice. It discusses an investment strategy suitable for CIC by SWOT analysis, and then makes some suggestions.

Zusammenfassung

Staatsfonds (Sovereign wealth fund, SWF) sind Fonds die Kapital im Auftrag eines Staats anlegen und verwalten. Die ersten SWS tauchten in 1950 auf. Es ist interessant zu beobachten, dass SWFs neuerlich eine wachsende Aufmerksamkeit aus der Öffentlichkeit und akademischen Gemeinschaft bekommen. SWFs haben einen wichtigen Platz in globalen Kapitalmärkten und haben auch Konsequenzen für die Funktionsweise der Weltwirtschaft haben.

Diese Diplomarbeit besteht aus sechs Kapiteln. Im ersten Kapitel stelle ich das Konzept und die Theorie der Staatsfonds vor. Das zweite Kapitel analysiert die Mechanismen, die Ausführung und Überwachung von SWFs Investitionen. Kapitel drei behandelt die wichtigsten Gründe der Entwicklung der Staatsfonds. . Es wird argumentiert, dass SWFs insbesondere aus folgenden Gründen gebildet werden: Anlage von Devisenüberschüssen, Anlage von Haushaltsüberschüssen, Ausgleich von Preisschwankungen von Rohstoffen, Schutz der Volkswirtschaft vor Inflation und als Reserve für die Zeit nach der Erschöpfung von Rohstoffvorräten. Kapitel vier analysiert einige erfolgreiche Staatsfonds, darunter Staatsfonds Singapurs, Norwegian Government Pension Fund Global, American Alters-, Hinterlassenen-und Invalidenversicherung (OASDI). Kapitel fünf und sechs beschreiben die Entwicklung und die Probleme der Staatsfonds in China. Es wird speziell auf die Entwicklung der China Investment Corporation (CIC) eingegangen. Diese Kapitel beschreibt auch eine Strategie der Investitionen für CIC anhand einer SWOT-Analyse.

Contents

1. Introduction

1.1 The Generation of Sovereign Wealth Funds and the Impact

A sovereign wealth fund (SWF) is a state-owned investment fund composed of financial assets such as stocks, bonds, property, precious metals or other financial instruments. Sovereign wealth funds invest globally. SWFs are typically created when governments have budgetary surpluses and have little or no international debt (Johnson, 2007).[1] The accumulated funds usually have their origin in rising prices for commodities such as oil and other natural resource revenues (White, 2007 and Lomax, 2007).[2]

As for the impact on SWFs, different scholars hold different opinions. Truman (2007) insists that since the transparency of SWF is low, it is difficult to make an accurate assessment of its asset management activities and its impact on the capital market.[3] There are also some scholars who hold positive attitudes. For example, Gieve (2008) and others believe that as long-term investors, SWFs have played a certain role to stabilize the financial market.[4] But Clay (2007)[5] and Daniel (2008) tends to think that because the scale of SWFs is too large and the investment policies are not transparent, it will lead to herding behavior and increase market volatility. Johnson (2007) and Schonberg (2008) also point out that SWFs may cause protectionism and undermine the international financial order. Miles (2007) argues that the increase in the number of SWFs will raise the market risk tolerance and the price of risk of assets.[6] Roland Beck and Michael Fidora (2008) believe that SWFs could exert a stabilising effect on

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1 Simon Johnson. *The Rise of Sovereign Wealth Funds*, (2007, 9)

2 Philip White, Katinka Barysch. *What Should Europe Do about SovereignWealth Funds?* CER bulletin, (2007)

3 Edwin M.Truman. *Sovereign Wealth Funds: The Need for Greater Transparency and Accountability*, Peterson Institute for International Economics, (2007)

4 John Gieve. *Sovereign Wealth Funds and Global imbalances*, London: Sovereign Wealth Management Conference, (2008, 3)

5 Lowery Clay. *Sovereign Wealth Funds and the International Financial System*, (2007, 6)

6 David Miles. *Sovereign Wealth Funds and Bond and Equity Prices*, Morgan Stanley Research Global, (2007, 6)

financial markets, in addition, SWFs may contribute to a more efficient sharing and diversification of risk at the global level. They also think that any impact of SWFs on global financial market structure and stability will depend critically on the motives underlying the investment decisions of such funds.[7]

1.2 The Concept, Characteristics and Classification of SWFs

1.2.1 The Concept of SWFs

The history of SWFs dates back to at least 1953 when, according to the Kuwait Investment Authority, the "Kuwait Investment Board was set up with the aim of investing surplus oil revenues to reduce the reliance of Kuwait on its finite oil resource".[8] It has been half a century since the SWFs developed. But its concept was proposed by the senior economist Andrew Rozanov (2005). He noted that SWFs were "neither traditional public pension funds nor reserve assets supporting currencies, but a different type of entity altogether" (Rozanov, 2005, 52). Rozanov (2008, p. 15) recently noted that SWFs "…differ in size, age, structure, funding sources, governance, policy objectives, risk/return profiles, investment horizons, eligible asset classes and instruments, not to mention levels of transparency and accessibility".

So far, although there are a variety of definitions put forward by various research institutions, none has been widely accepted. SWFs according to Deutsche Bank (2007) can also be called National Investment Funds. They hold and manage the public funds, and invest in multiple asset portfolios. These funds derive from the excessive liquidity of the public department and are usually financed by the government financial surplus and the official reserves of the Central Banks. However, the Organisation for Economic Co-operation and Development (OECD) and the Treasury Department of United States simply defined SWFs as a government investment instrument financing the foreign exchange assets (Kimmitt, 2008). International Monetary Fund (IMF) defined it in the *Global Financial Stability Report*: "established or owned by the

[7], [8] Roland Beck and Michael Fidora. *The impact of sovereign wealth funds on global financial markets*. (2008)

government, and it is a kind of special investment fund which holds the foreign assets for long-term goal." The invested funds usually derived from the export revenues of natural resources, incomes of privatization and the accumulation of foreign financial assets by the monetary authorities. Ashby H. B. Monk (2008) argues that SWFs are government-owned and controlled (directly or indirectly) investment funds that have no outside beneficiaries or liabilities (beyond the government or the citizenry in abstract) and that invest their assets, either in the short or long term, according to the interests and objectives of the sovereign sponsor.[9]

Although these institutions used different expressions, they share a common idea. And from these definitions we can draw the outline of SWFs: Their business objective is the sovereign wealth of a nation and their capital comes from diverse sources which may be the foreign exchange reserve from the capital account or trade surplus, or the incomes of export of natural resources. Their management entities are mainly some foreign investment institutions like the state-owned government investment companies, national public pension funds etc., which may have independent investment strategies.

1.2.2 Characteristics of the SWFs

As specialized and market-oriented financial actors, SWFs will not be issued in public or in private, which is quite different from public and private funds. Meanwhile they differ from traditional government pension funds and official foreign exchange reserves in that they actively invest in the international financial markets aiming at profit. Therefore, they have their own specific characteristics:

1) It has a certain color of sovereignty and is influenced by the national policy

Since the SWFs are set up and owned by the government and represent a certain national wealth, it undoubtedly has a certain color of sovereignty. It has a tendency of national policy in its business strategy and personnel arrangement. For example, the

[9] Ashby H. B. Monk, *Recasting the Sovereign Wealth Fund Debate: Trust, Legitimacy, and Governance* (2008)

SWF for the purpose of obtaining resources and other strategic investments reflects the nation's policy goals of supporting some of the industrial development. The central bank may also exchange personnel with SWFs. Of course, the SWFs which have a certain color of sovereignty would face big resistance in foreign investment. However, the U.S. Alaska permanent reserve fund is an exception, for it is established and managed by the state government instead of the nation.

2) Most of SWFs use a passive investment strategy with long term investments

Although SWFs have a big share holding in its invested company, usually they do not propose a company management requirement but maintain company's existing operation mechanism. It is opposite to the active investment strategy of market-oriented private equity funds. Also, the SWFs mostly invest in stocks, bonds, monetary market and other risky assets, but rarely set foot in the financial derivatives markets. It also has a long term. All these derived from a pursuit of long-term stable profits and are the differences with the active hedge funds.

3) Low transparency

The transparency of SWFs means the degree of public disclosure of information in the operation process of SWFs including the investment information, corporate governance information and so on. Some SWFs have a strong influence on the financial market, but since its asset scale and investment strategy are kept in secret to the outside world, it is very difficult to make an accurate assessment on the investment management activities and its influence on the asset market. This makes the SWF very mysterious. The low transparency of SWFs is inseparably linked with the characteristics of its sovereign. As some SWFs have a close relationship with the national interests and are supported by the government, they can make direct investments. And at the same time, they are the professional market-oriented investment institutions so that they can involve in the market with private capitals via the investing channel which has strong disguise. Therefore, the difficulty in grasping the scale and orientation of SWFs is not good for the stability of the international financial market (Badian, Laura, Gergory, 2008). Surely, not all the SWFs are non-transparent. The research report of the Standard Chartered Bank (SCB) indicates that the low-transparent SWFs are mainly in UAE, Kuwait, China, Qatar, Brunei, Venezuela, while SWFs in Norway, Singapore - Temasek, the United States (Alaska), Canada (Alberta) and Malaysia are in higher transparency, for these countries will regularly disclose the details of its scale, return on investment and portfolio to the public.

1.2.3 The Classification of SWFs

- Classified by the source of the fund

For different needs, each country has its own way to raise funds. Thus, many researchers such as Lowery Clay (2007) classified SWFs into three categories according to the source of the fund:

1) As for the fund of foreign exchange reserves and budget surplus, the main source of SWFs is the gain on exchange of the export-oriented economy income from Singapore, Korea, Malaysia, China, China's Taiwan and Hong Kong in Asia. While in Australia and Ireland, the money for investment is mainly from the fiscal dividend and the income of state-owned property after privatization.

2) As for the fund of natural resource export income, the source of the capital is mainly from export incomes or the export tax of oil, gas, copper, diamond and other natural resources. Middle East and Latin American countries are representative countries.

3) The international aid fund, the Uganda poverty aid fund is the representative.

- Classified by the investment purpose

1) Stabilization-oriented Fund

Some countries which badly depend on exports of natural resources established SWFs seeking for long-term benefits. The purposes are to ensure their sustainable development, balance the national income across different period, guarantee the fiscal income after resource exhaustion and also reduce the impact of short-term fluctuations of resources output and market price fluctuation on economy. The most representative countries are United Arab Emirates, Kuwait, Saudi Arabia and other Middle East countries with oil revenues as their main earnings.

2) Sterilization-oriented Fund

Sterilization-oriented Fund is mainly used to sterilize the liquidity and the increased opportunity cost caused by excessive foreign exchange reserves. The base currency consists of net domestic assets and net foreign assets. The trade surplus in some exporting countries sharply increased foreign exchange reserves. Central bank's buying foreign exchange reserves lead to the increase of the base currency. Both of them caused excessive liquidity and bring appreciation pressure to national currency units. Also, the rate of return is very low for the foreign exchange reserves which have preventive purposes and this will produce large amount of opportunity cost. At the same time, the way to control the liquidity by issuing bonds demands the rate of return of foreign exchange reserves be higher than the domestic interest rates of bonds. Otherwise, it will produce accounting cost. The establishment of SWFs can recycle one country's excessive liquidity by issuing special bonds.

3) Savings-oriented Fund

For the need of sustainable development of wealth, saving wealth for future generations and dealing with the aging of population as well as avoiding the influence of the declining natural resource export income on pensions, some countries have established SWFs which are similar to savings to balance the intergenerational distribution of national wealth, among which the most typical is Norwegian government pension fund.

4) Preventive Fund

In one country's development, it will meet many unexpected crisis and uncertainties. Therefore, SWFs are established out of prevention to ensure the society develops smoothly and steadily.

5) Strategy-oriented Fund

In order to coordinate with national development strategies and industrial policies and achieve most optimal distribution of global resources, SWFs are established through the capital advantage to inject to countries which lack funds to gain a higher profit. This also reflects the guidance character of the policy. Among them Singapore Temasek is a good example.

This classification stresses the purpose of SWF's investment. At the same time, it also shows the SWF's positive impact on national economic development. Of course, the aim of SWF's establishment is not simple but mixed and focused. Different aims will correspond to different investment strategies. Therefore, the SWFs of different countries vary significantly, and the influences on world economy are also very complicated.

2. The Operating Analysis of SWFs and Supervision Mechanism

2.1 Operation of Analysis of SWFs

2.1.1 The Establishment Analysis of the SWF Investment

The cross-national investment behavior of SWFs generally involves six interest-related persons, resulting in their different interests and concerns:

Figure 1 Constituencies, Interests and Concerns about SWFs[10]

The investment objective of SWFs is to obtain equal opportunities and human resources in the international financial markets and achieve a professional management level to get certain autonomy. It not only concerns the voice of increasing its transparency, but also hopes to avoid political disputes with the host investment country.

The objective of all countries which own the SWFs are: make profits through diverse investment to achieve a balance between flexibility and profitability of the fund; enhance its impact on the global financial system; concerns calls for transparency mainly from international regulatory agencies and the host countries and avoid political conflicts arising from trade protectionism.

The national government accepting the sovereignty investment mainly wants to meet the capital shortfall with the help of the capital in SWFs, and meanwhile actively protect important economic assets in its own country to ensure national security. In addition, the host country also expects to achieve mutually benefit with the countries which own sovereign funds in trade and investment. Its concerns are from the non-financial behavior in those non-friendly SWFs which don't have a sufficient

[10] William Miracky, Davis Dyer, Drosten Fisher. *Assessing the Risks: the behaviors of sovereign wealth funds in the global,* (2008)

transparency. And its fear may be the Trojan horse.[11]

Multilateral regulatory institutions are mainly responsible for protecting the free flow of capitals in global financial markets, providing all investors with an equal competitive platform and maintaining the stability of the global financial system. It focuses on those SWFs which lack of transparency, non- commercial investments and will bring global risks. (Martin, 2007)

For those enterprises which consider accepting SWFs, obtaining the foreign capital is a good opportunity to develop themselves and make greater innovation, so they tend to cooperate with the long-term investors. The concerns it is to eliminate are the industrial protective policies related with political interests in commercial transactions or against the country's.

Other financial institutions want to cooperate with the SWFs in international investment, and maintain contacts with bilateral countries to actively seek new partners. Their own concerns are the adverse fluctuations of the asset prices and risk premium level caused by the involvement of SWFs in the international financial market. They also worries about non-market operations of SWFs.

The analysis of the scale of SWFs is mainly centered on the initial size and their dynamic size. The initial size refers to the capital size when SWF was established, which is determined by the foreign exchange reserve scale and policies of sovereign countries. The dynamic scale refers to the changes in capital after SWF's establishment, including account changes in fund size and changes in equity. The former is the change in book value occurred in the investment caused by gains and losses, and it is directly related to investment returns. While the latter refers to the increase or decrease in equity capital, which is primarily determined by the import and export scale, fluctuation amplitude of foreign exchange rate, intervention frequency and degree in the foreign exchange and the financing capacity of the

[11] Trojan horses hidden referred to the illegal procedure in the legal proceedings originally. Here extended to the potential risks.

sovereign country in the international market. Although it is not directly linked with changes in investment incomes, a country tends to increase the equity investment in SWFs when the general trend of international investment is in good prospects. The study on the interactive effect of foreign exchange reserves and the SWFs focuses on the dynamic scale management of SWFs.

2.1.2 The Investment Procedure of SWFs

SWFs must first make a clear investment strategy, including investment objectives, the scope of investment, the portfolio of financial instruments and a series of requirements. Only after the formulation and implementation of the investment strategy can SWFs have a continuous investment and a reduction in the investment risk through portfolio.

The category of SWFs is divided into strategic investment and financial investment portfolio according to the purpose. Strategic investment is the long-term investment cooperation to achieve upgrading of industrial structure, enhance their core competitiveness and innovation, expand the market share of their products, seek to control or gain long-term benefit return and the sustainable development of the enterprise by certain funds, technologies, management, market, talents and other advantages. In the international financial market, the enterprise which has made a strategic investment company is Singapore Temasek Holdings. At first, it was only responsible for managing Singapore's state-owned enterprises. Portfolio investment is a kind of investment which is not to obtain control over the shares. The typical one is the Government Pension Fund-Global, short for GPFG). The average proportion of equities in its invested 3500 companies is less than 1%.

The investment scope of SWFs includes bonds, equities, stocks and financial derivatives. Summers (2007) divided these into three investment models according to the preference of financial tools: firstly, the typical central bank portfolio; secondly, typical pension funds portfolio; thirdly, all US stock portfolio. [12]

The chief foreign currency economist Morgan Stanly Ren Yongli pointed out that there were three ways to expand the investment scope of SWFs from the treasury bonds holding at the early stage to the international investment of corporate bonds. [13] (See Figure 2)

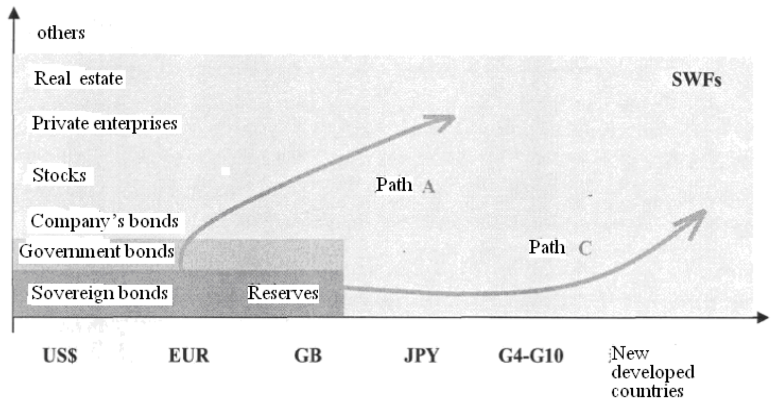

Figure 2 Divided Paths for Two Patterns Investment

1. Benchmark Path: a kind of investment portfolio which contains 25% of bonds, 45% of equities and 30% of optional assets (mainly the real estate, the infrastructures, private funds, commodities and hedge funds) and its currency structure consists of 43% of American Dollars, 18% of Euros, 17% of non-G4 currencies, 13% of Yens and 8.5% of Pounds.

2. Path B: To realize the investment mode of asset diversification as the principle part, take the diversification of the investment objectives as the main target and make a transition from sovereignty bonds to a financial tool with high liquidity and convertibility in the risk market but concentrated on the currencies of some major countries.

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[12] Summers Lawrence. *Funds that Shake Capitalist Logic*, (2007)

[13] See: http://www.morganstanley.com/views/gef/archive/2007/20071019-Fri.html

3. Path C: Compared with path A, it aims at realizing the investment mode of the diversification of investment currencies as the principle part, take the diversification of the multinational investments as the main target but the category of the products is certain. Ren Yongli pointed out again that the probability of Path A was higher than the other two paths because before entering the real estate market and the private fund, it paid more attention on the investigation of liquidity.

There are also two modes of operation for SWFs. One is entirely an internal mode of investment management. From the formulation of investment strategy to the implementation are all done by the internal management institutions of SWFs. This mode can be applied to those sovereign states which have rich international investment experience, sound internal functions and institutions as well as strong investment management. The other is entrusted to external fund managers (EFM) to manage. This mode can be applied to those sovereign states which lack experience in international investment or have a small fund scale. Generally speaking, the investment management of SWFs is a combination of the two modes, both has the project to complete by itself and the project to entrust to the EFM.

2.1.3 The Investment Risk Control of SWFs

SWFs will face various kinds of risks in international investments, so the risk management on one hand is to minimize the absolute risk as possible as it can, and the other is to match the investment incomes and risks.

The investment risks of SWFs can mainly be classified into the systemic risk, unsystemic risk and operational risk. The systemic risk is caused by those risk factors that influence the whole international financial market. These include the global economic cycle, the global financial crisis and so on. As this part of risk can affect all the probable values of the financial variables, it can not be canceled out or undermined by investment diversifications. While the unsystematic risk is a kind of risk that has a close relationship with the particular investment fields and targets, and it is also closely linked with the macroeconomic policies, politics, industrial development conditions and the investment entities of the invested countries. It includes the market risk, liquidity risk, credit risk, industry risk and so on. The unsystematic risk can be reduced efficiently by investment diversifications. The operational risks include personnel risk, process risk, operating system risk and legal risk.

The systematic risk can not be dispersed and eliminated by asset allocation and currency allocation. And it has an increasing trend as the financial and economic globalization deepens, the changes of the world economy become increasingly close, more and more local crisis evolved into global crisis. Unsystematic risk can be dispersed by means of investment diversification and quantitative analysis to reduce the risk interaction among different assets and different regions, which further reduce the whole risks. The operational risk is caused by the operational system of the funds itself, so it is more important to promote the participants' comprehensive qualities besides strengthening the establishment of systems and institutions.

2.2 The Supervision Mechanism of SWFs

2.2.1 The Transparency of SWFs

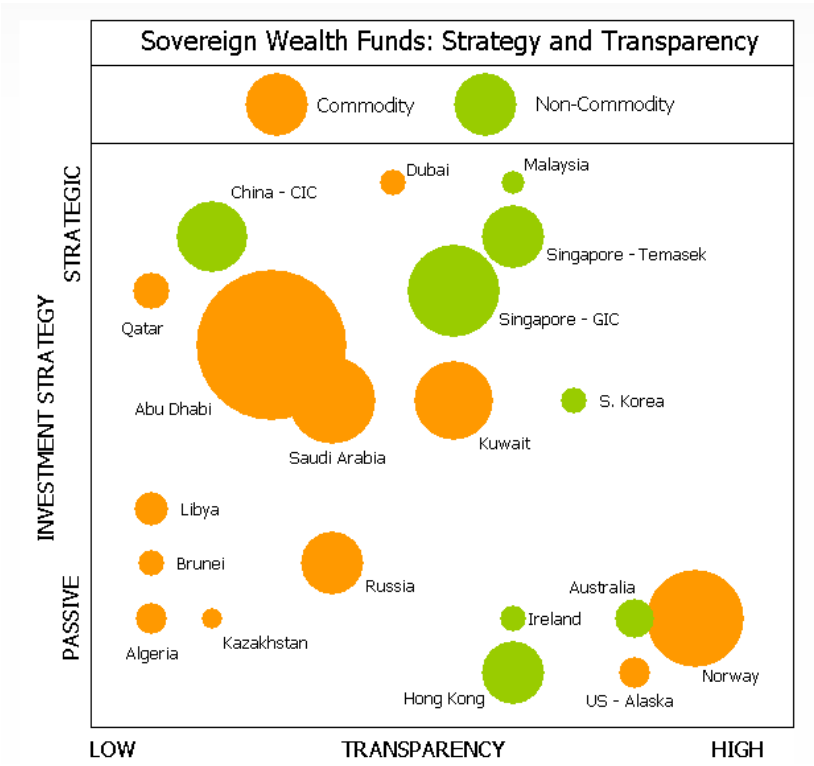
The transparency of SWFs is mainly embodied in two dimensions: one is the company organization structure and management mechanism of SWFs; the other is company investment structure and asset portfolio. The transparency of the organization structure reflects in its internal functional division and investment decision-making process. While transparency in asset portfolio, it is embodied in the scope of investment, investment targets and the financial situation of investment.

Transparency balance is not only the key content in SWFs supervision, but also a final result after the competition between commercial operationalization and sovereignty independence of a fund holder. Generally speaking, the level of transparency has an inverse ratio with fund performance. For example, the Norwegian government pension fund-global opens its investment strategy and investment results to public each quarter of a year. And it publishes its annual report every year. Its annual rate of return is 4.3% for 10 years. But the annual rate of return of Singapore Temasek which is relatively radical in operation and only disclosed information to internal shareholders reached 18% in 34 years. Transparency degree also directly relates to investment market access and financial protectionism. The SWFs with a high transparency has lower market admittance and is highly welcomed in the international investment market. Meanwhile, the SWFs with a high transparency and sovereignty is often doubted and obstructed.

Truman (2007) put forward a set of evaluation standards of behaviors for SWFs. It includes four main types with different scores. They are structure, governance, transparency, responsibility and behavior. He also gave a mark for 32 SWFs of 28 countries including local government funds in Canada and the United States. Each Transparency and responsibility in Trumans' theory has 12 points. It includes report, investment and audit with 12 questions in different scores. According the ranking, the New Zealand pension fund gets 12 points and takes the first place. Norwegian government pension fund-global ranked second with 10.5 points. For China SAFE Investments Ltd, the integral on transparency and responsibility is only 0.5 points (CIC is not counted in). Table 1 and figure 3 show a classification of SWFs in these two dimensions according to transparency and investment.

		Transparency	
		Low	High
Investment strategy	Strategic Investment	UAE, Qater, China	Malaysia, Singapore
	Portfolio investment	Taiwan, Venezuela, Chile	Norway, USA(Alaska), Canada

Table 1 Categories of SWFs according to the Investment Strategy and Transparency



Source: SWF institute Updated March 18, 2008

Figure 3 Sovereign Wealth Transparency & Investment Strategy

2.2.2 The Supervision Mode of SWFs

Due to the rapid expansion and infiltration of SWFs all over the world, the supervision issues are concerned by all countries gradually. Generally speaking, there are three common reasons for the regulation and supervision of all countries' SWFs: to protect the investor's interests; guard the market completeness; ensure the market stability.

Based on the differences of transparency requirement, the supervision of different countries' SWF can be divided into two attitudes: general supervision and strict supervision. General supervision mainly controls the unreasonable flow of SWFs, but it has no restrictions on investment entering. It includes the following aspects:

- A specific investment target and strategy
- A clear governance structure
- Transparent operation and timely and real disclosure of information
- Restrictive investment behavior
- Clear bilateral responsibilities and so on.

The strict supervision is that the host country unilaterally restricts SWFs entering its domestic financial market through its domestic rules, which shows a restrictive discriminatory attitude. It performs like making mutual benefit request to the country which owns the fund, fixing the maximum limit on company's stock investment proportion, restricting the option of investment industry, promulgating very strict examine procedure and so on. Based on the different emphasis of supervision target, the supervision of SWFs can be divided into proactive supervision, mid-event supervision and subsequent supervision. Proactive supervision mainly is supervision of market access and business access; mid-event supervision mainly is supervision of fund investment's operational activities; subsequent supervision mainly is supervision which is taken when the fund has some violations or causes a crisis.

2.2.3 Investment Performance Evaluation of SWFs

SWF as a special fund can also be applied to the estimated index of the three investment performance: Sharpe's ratio, Treynor's ratio and Jensen's ratio.

Sharpe's ratio was proposed by William F. Sharpe (1966), and it uses long-term average excessive return of the asset portfolio to divide the standard deviation of returns during this period to measure the return balanced by the overall volatility. The greater is the value; the better is the fund's performance.

Treynor's ratio was proposed by Jaek L.Treynor (1965), and it equals the ratio of the excess earning and unit systemic risk factor which measured the excess earnings of single risk in the fund investment.

Jensen's ratio was proposed by Miehael C. Jensen (1945-1964). It is an absolute index evaluating the fund' performance and is the average revenue of investment portfolio that established on the basis of the calculation of CAPM which reflects the fund managers' capability to choose funds or their market judgement.

In addition to these three performance evaluation measurement of funds, there are information ratio and the Sortino ratio can be used to measure the returns on investment. But in the practical operation, on one hand, it's very difficult to have the data to estimate these ratios; on the other hand, the theoretically feasible data is difficult to operate in the practical operation. Therefore, to measure the performance of SWF more reasonably, different countries have established feasible and comparatively high operability evaluation criteria. The Singapore GIC points out in its investment objectives that it should realize an effective rate of return higher than the average inflation rate of G3[14] in its long-term objective (Beck, R and M. Fidora, 2008). And the KIC of Korea even designed different evaluation criteria in different regions. For example, the investment reference standard of the American Large-gap in American market is the S&P500 index[15] and Canadian LargecaP is S&P/TSX Capped Composite index.[16] In addition to this, the Korean Klc also set up the evaluation criterion for Altemative Investment products: to private equity, the reference standard is S&P1200 global index;[17] to real estate, the reference standard is UBS global index; to the hedge fund, the reference standard is the mixed fund index of HFRTI fund.

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[14] G3 means America, EU and Japan

[15] The S&P 500 is a free-float capitalization-weighted index published since 1957 of the prices of 500 large-cap common stocks actively traded in the United States. The stocks included in the S&P 500 are those of large publicly held companies that trade on either of the two largest American stock market companies; the NYSE Euronext and the NASDAQ OMX.

[16] The S&P/TSX Composite Index is an index of the stock (equity) prices of the largest companies on the Toronto Stock Exchange (TSX) as measured by market capitalization.

[17] The S&P Global 1200 Index is a free-float weighted stock market index of global equities from Standard & Poor's. The index covers 31 countries and approximately 70 percent of global stock market capitalization.

3. The Recent Development of SWFs and Its Determinants

3.1 The Recent Development of Sovereign Wealth Funds

According to the estimates from SWF Institute[18], by June 2010, the assets held by sovereign wealth funds are about 3.9 trillion. There are forty countries and areas where sovereign wealth funds have been established. Based on the size of assets managed by sovereign wealth funds, the latest data from SWF institute indicates that Abu Dhabi Investment Authority (＄627 billion), Government Pension Fund – Global (＄442 billion), SAMA Foreign Holdings (＄415 billion), SAFE Investment Company (＄347.1 billion), China Investment Corporation (＄288.8 billion), Government of Singapore Investment Corporation(＄247.5 billion) occupy the first ranks. What is worth being mentioned is that the assets concentration ratio of global sovereign wealth funds is very high, with the largest eight of them accounting for 71.9% of the global overall scale.

In addition, the data from SWF Institute also indicate that 37% of the SWFs are set up by the countries in the Middle East, with Asian SWFs accounting for 38%, European SWFs accounting for 18%, American SWFs accounting for 2%, and other countries and areas accounting for 2%. In regard to the source of assets, 60% SWFs asset sources are related to oil and gas, with the remaining 40% having other sources.

[18] The Sovereign Wealth Fund Institute is an organization designed to study Sovereign Wealth Funds and their impact on Global Economics, Politics, Financial Markets, Trade, and Public Policy.

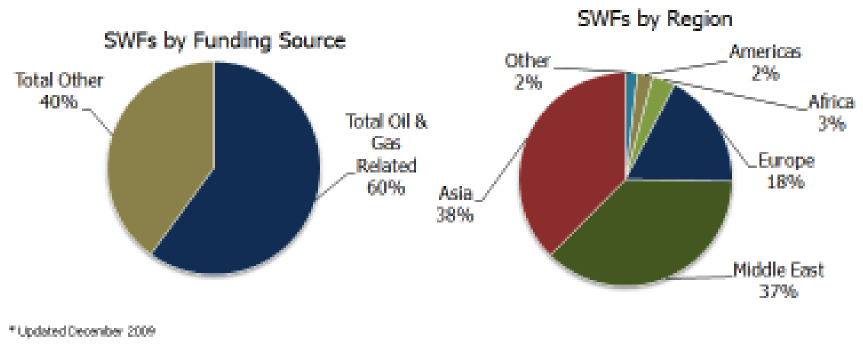


Figure 4 Distribution Situations of Sovereign Wealth Funds

Elements such as high prices of resource commodities, financial globalization, and constant out-of-balance in global financial system, etc. will cause rapid accumulation of foreign exchange assets in some related countries. Since the accumulation of reserve funds is far beyond every country's emergency need, a majority of the foreign exchange assets will continue to be turned into the kind of assets managed by SWFs in order to maintain and increase their value. International Monetary Fund predicts that the international assets owned by SWFs will continue to increase by ＄800 billion to ＄900 billion annually. By 2012, the total foreign exchange assets managed by SWFs are ＄12 trillion, which amount to America's GDP in 2008. Morgan Stanley predicts that the foreign exchange assets managed by SWFs may exceed official reserves in 2011, and The Standard Chartered Bank predicts that sovereign wealth funds will reach ＄13.4 trillion in 2017.

Country	Fund Name	Assets $ Billion	Inception	Origin	Transparency Index
UAE- Abu Dhabi	Abu Dhabi Investment Authority	$627	1976	Oil	3
Norway	Government Pension Fund- Global	$442	1990	Oil	10
Saudi Arabia	SAMA Foreign Holdings	$415	n/a	Oil	2
China	SAFE Investment Company	$347.1**	1997	Non-Commodity	2
China	China Investment Corporation	$288.8	2007	Non-Commodity	6
Singapore	Government of Singapore Investment Corporation	$247.5	1981	Non-Commodity	6
China-Hong Kong	Hong Kong Monetary Authority Investment Portfolio	$227.6	1993	Non-Commodity	8
Kuwait	Kuwait Investment Authority	$202.8	1953	Oil	6
China	National Social Security Fund	$146.5	2000	Non-Commodity	5

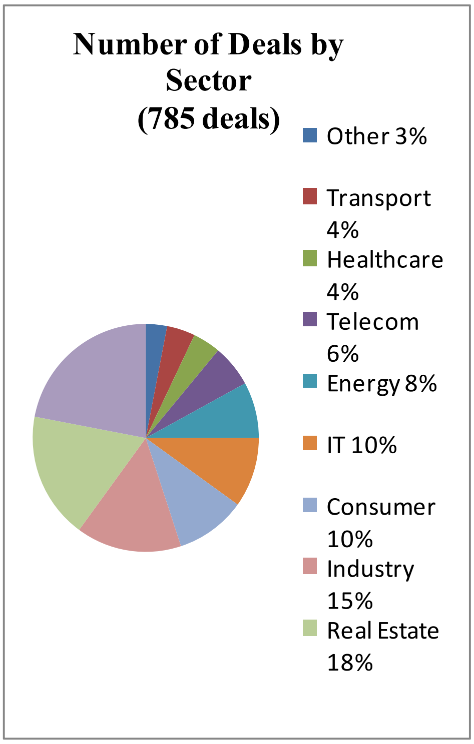
Russia	National Welfare Fund	$142.5	2008	Oil	5
Singapore	Temasek Holdings	$122	1974	Non-Commodity	10
Libya	Libyan Investment Authority	$70	2006	Oil	2
Qatar	Qatar Investment Authority	$65	2005	Oil	5
Australia	Australian Future Fund	$59.1	2004	Non-Commodity	9
Algeria	Revenue Regulation Fund	$54.8	2000	Oil	1
Kazakhstan	Kazakhstan National Fund	§38	2000	Oil	6
US- Alaska	Alaska Permanent Fund	$35.5	1976	Oil	10
Ireland	National Pensions Reserve Fund	$33	2001	Non-Commodity	10
South Korea	Korea Investment Corporation	§30.3	2005	Non-Commodity	9
Brunei	Brunei Investment Agency	$30	1983	Oil	1
France	Strategic Investment Fund	$28	2008	Non-Commodity	new
Malaysia	Khazanah Nasional	$25	1993	Non-Commodity	4
Iran	Oil Stabilisation Fund	$23	1999	Oil	1
Chile	Social and Economic Stabilization Fund	$21.8	1985	Copper	10
UAE- Dubai	Investment Corporation of Dubai	$19.6	2006	Oil	4
Azerbaijan	State Oil Fund	$14.9	1999	Oil	10
UAE- Abu Dhabi	International Petroleum Investment Company	$14	1984	Oil	n/a
Canada	Alberta's Heritage Fund	$13.8	1976	Oil	9
UAE-Abu Dhabi	Mubadala Development Company	$13.3	2002	Oil	10
US- New Mexico	New Mexico State Investment Office Trust	$12.9	1958	Non-Commodity	9
New Zealand	New Zealand Superannuation Fund	$12.1	2003	Non-Commodity	10
Nigeria	Excess Crude Account	$9.4	2004	Oil	1
Bahrain	Mumtalakat Holding Company	$9.1	2006	Oil	8
Brazil	Sovereign Fund of Brazil	$8.6	2009	Non-Commodity	New
Oman	State General Reserve Fund	$8.2	1980	Oil & Gas	1
Botswana	Pula Fund	$6.9	1994	Diamonds & Minerals	1
Saudi Arabia	Public Investment Fund	$5.3	2008	Oil	3
China	China- Africa Development Fund	$5.0	2007	Non-Commodity	4
East Timor	Timor- Leste Petroleum Fund	$5.0	2005	Oil & Gas	6
US- Wyoming	Permanent Wyoming Mineral Trust Fund	$3.6	1974	Minerals	9
Trinidad &Tobago	Heritage and Stabilization Fund	$2.9	2000	Oil	5
UAE- Ras Al Khaimah	RAK Investment Authority	$1.2	2005	Oil	3
Venezuela	FEM	$0.8	1998	Oil	1
Vietnam	State Capital Investment Corporation	$0.5	2006	Non-Commodity	4
Kiribati	Revenue Equalization Reserve Fund	$0.4	1956	Phosphates	1
Indonesia	Government Investment Authority	$0.3	2006	Non-Commodity	-
Mauritania	National Fund for Hydrocarbon Reserves	$0.3	2006	Oil & Gas	1

UAE- Federal	Emirates Investment Authority	-	2007	Oil	2
Oman	Oman Investment Fund	-	2006	Oil	n/a
UAE- Abu Dhabi	Abu Dhabi Investment Council	-	2007	Oil	-
	Total Oil & Gas Related	$2264.4			
	Total Other	$1627.0			
	Total	**$3891.4**			

Source: SWF Institute Updated June 2010

Table 2 World's major Sovereign Wealth Funds

Although most SWFs invest heavily in their own countries, the scales of investment are usually not very large. According to the observation of SWF's investment preference with respect to the business on which they invest, banking business is the hottest option, and the next is real estate business. Figure 5 Shows the distribution in industrial sector.



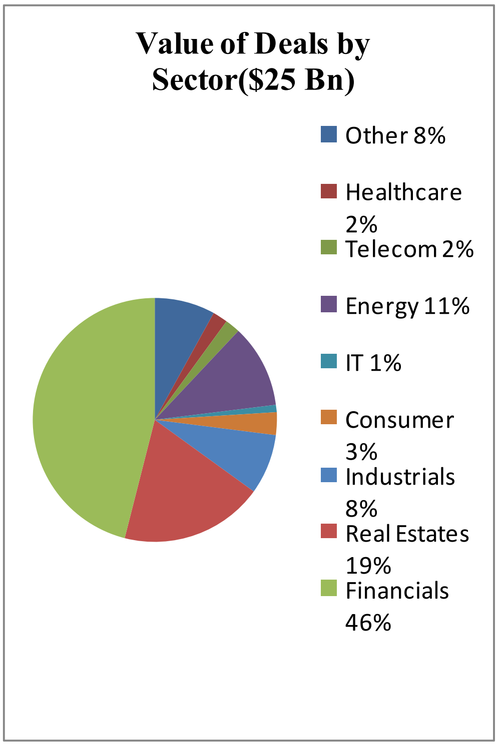


Figure 5 SWF's Investment by Sector[19]

[19] William Miracky, Davis Dyer, Drosten Fishe, *Assessing the Risks: the behaviors of sovereign wealth funds in the global economy*, (2008)

With the investment of SWFs in international market becoming more and more active, the political issues between investor countries and host countries have occurred, which caused some business operations to end earlier than expected. As early as in 2005, the U.S has rejected CNOOC's Unocal[20] purchase, because according to them, this purchase is an outpost of Chinese government's strategy of energy interest. It so happens that because of the objection from ITUA, in 2006, DP World, whose stakes are controlled by United Arab Emirates, had to transfer the harbor business in America to another American entity. What's more, major developed countries have put forward industrial protection policies specific to the investment on sovereign wealth funds. For example, Germany has warned Russia explicitly not to purchase Germany's gas pipeline and Public Utility Corporation; New Zealand is against the plan of ADIA's purchase of the airport; German and France intend to move up the purchase ladder of sovereign wealth funds, or prevent foreign capital purchasing strategic assets by legislation.

Currently, the bilateral or multilateral supervisory protocols with regard to SWFs are mainly the tripartite agreement among the U.S, The United Arab Emirates and Singapore. (Gilson, Milhaupt, 2008) This protocol agrees on 9 terms, five of which bind SWFs and four of which bind investment destinations. The core of this protocol is USA accepts the investment from SWFs which must submit to the strict management. The codes of conduct of SWFs are as following: First, the investment from SWFs must be pure commercial operation, with no political purposes; second, SWFs must increase information disclosure about investment purposes, financial conditions, rate of return and a serious of other conditions; third, SWFs should strengthen internal administration; fourth, SWFs must ensure fair competition with private enterprises; fifth, SWFs must obey monitoring regulations about investment purpose. The following are four restrictive regulations for investment destinations: First, investment destinations should not set protective barriers against foreign investment; second, investment destinations must make sure that their investment

[20] CNOOC's Unocal is an American Energy group

policies are predictable; third, investment destinations should not hold biased attitude toward relevant investors; forth, the restrictions on SWFs' relevant transactions for "national securities" should be made based on real risks of "national securities". Moreover, the World Bank and IMF, even European Commissions is planning to make relevant rules and standards. In September 2008, on the third conference of IWG in Santiago, Chile, IMF has reached initial agreement on generally accepted principles and practices (GAPP) of SWFs. (Hammer, Kunzel, Petrova, 2008)

3.2 The Rise of SWFs and Reasons of its vigorous Development

Many researchers argue that the development of SWFs has been driven by increasing long-term current account surplus and the accumulation of reserves of foreign exchange beyond emergency needs (Johnson, 2007 and George Magnus2007). On the other hand, some SWFs simply invest the state savings by various entities for the purposes of investment return, and this type of SWFs may not have a significant role in fiscal management. Starting with the aspect of the overall performance of world economy, Philip Whyte and Katinka Barysch (2007), Lomax (2007) and other scholars studied the reason why the countries with current account surplus have foreign exchange surplus and hold that the objective reason of the vigorous development of SWFs is the result of increasing price of resource commodities and the out-of- balance in world trade.[21]

The prediction about the future growth trend of SWFs varies from different scholars. However, most of them, such as Magnus (2007), Humpage and Schenck (2007), Kern (2007), Philipp (2007) all think that the total amount of SWF will increase rapidly. Among these scholars, the prediction from Ren Yongli is the most representative and quoted, which estimates the total SWFs will reach ＄12 trillion and exceed the total

[21] Philip Whyte, Katinka Barysch. *What Should Europe Do about Sovereign Wealth Funds?* CER bulletin, Is 56 (2007)

amount of official reserve around the world before 2011.[22]

Although the subjective pressure partly accounts for the rapid rise of SWFs, the objective pressure contributes more to this result. The supply offered by SWFs is the inevitable outcome of the rapid development of world economy and trade. With positive characters such as wide investment range, stable and large-scale capital, the demand for SWFs from both the countries which start sovereign wealth funds and the countries which receive investment, is becoming increasingly high. This part will analyze the reasons of the vigorous development of SWFs both internally and externally. I think, for SWFs, the internal reasons are excessive opportunity cost resulting from huge sum of foreign exchange fund, pressure on the appreciation of domestic currency, the increasing degree of difficulty in the management of reserve assets and some other factors. The external reasons are convenient conditions caused by the changes in the structure of international division of labor and financial globalization.

3.2.1 Internal Reasons

Compared with foreign exchange reserve, the range of SWF investment is wider. Foreign exchange reserves are used to invest on things such as gold, government bonds, especially U.S treasury securities, which have lower risk and higher stability. While sovereign wealth funds are used to invest on public bonds, individual bonds, stocks, private shareholding, real estate, derivatives, etc. The phenomenon of rise in resource commodities and out-of-balance in global economy has caused the continuous expansion of foreign exchange reserve scale in many resource exporters and emerging market economy countries. Forced by outside pressure, these countries need to establish sovereign wealth funds to specialize in foreign exchange funds' investment business in order to manage the foreign exchange reserve actively and

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[22] Stephen Jen. *How Big Could Sovereign Wealth Funds Be by 2015?* Morgan Stanley Research Global. May 3, (2007)

increase profits. And the establishment of SWFs can depressurize the reserve management and appreciation of domestic currency.

3.2.1.1 The Pushing Effect from the Increase of Resource Commodities Prices

The SWFs of oil exporting countires are the first that were established globally and they are also the largest SWFs. The initial purpose to establish them is to stabilize the export price of oil and build up reserve for the later generations. Since 2000, the continuous rising of the international oil price has led to the oil exporting income of those exporting countries like Middle East and Russia skyrocketed. And as a final consequence, it led to rapid development of those SWFs which are funded by oil exports. (Aizenman, 2007)

The establishment of Russian SWF depends entirely on the rise of oil price. Entering 21st century, with the oil price surging continuously, as a large oil exporter, Russia earns billions of dollars by this business. According to estimation, during 2000 and 2007, the income received from oil export is over one trillion dollars. It became a primary task for Russia to manage this big fortune. In December 2003, Russia's government issued "Russian Federation Stabilization Fund Laws" and combined it into "Budget Code of Russia". In January 2004, Russia's sovereign wealth fund, Stabilization Fund, was established. Since the establishment of this fund, due to the fact that actual oil price is much higher than expected underlying price, along with Russia's repeatedly increasing oil export duties and tax rate of resource exploitation, the increase of aggregate fund has exceeded expectation. By the end of 2007, stabilization fund has reached ＄157 billion. From January 1st, 2008, Russia divided the stabilization fund into two parts, which are "National Welfare Fund" and "Reserve Fund". The utilization and management of these two funds became less strict after the split. The reasons are it not only allows for purchasing foreign bonds but also public loans issued by foreign central banks and monetary authority, bonds issued by IFC and deposits from foreign banks and credit institutions. (Jen, 2007)

According to the statistics in table 2, among the 50 SWFs, 29 are funded by income of oil business which manages $2278.5 billion funds, accounting for 59.8% of total amount of SWFs. What’s more, since prices of resource commodities keep increasing rapidly, Chile, Kiribati and some other countries have established SWFs that are funded by business of copper and minerals.

In fact, in SWF, the smooth fund is applicable to this case. The purpose of establishing smooth fund is to avoid national economic risks brought by fluctuation in prices of oil, resource commodities, etc. Fund is like a pool of capital, which is able to get some capital from the balance of foreign exchange when prices of resource commodities go up or foreign exchange inflow increases. When prices of commodities decrease or foreign exchange reserve goes down, part of the capital can be taken from smooth funds to make up for foreign exchange.

3.2.1.2 The Urgent Pursuit of Profits on the Foreign Exchange Assets from Oil Producing Countries and Surplus Countries

Currently, USA current account is out of balance for the deficit of current account occupies 6% of GDP, net external public debts being 30% of GDP. U.S dollar is facing a trend of mid-and-long term devaluation, which will definitely cause the decrease of the relative values of dollar assets. As a consequence, those developing countries which hold large amount of dollar assets will have to undergo the devaluation of foreign exchange reserve, the shrinkage being severe. While the U.S are confronted with astronomical deficit, oil producing countries and newly developing market countries gradually accumulate a huge sum of foreign exchange reserve. In order to maintain full liquidity and security of funds, no matter oil producing countries or countries with favorable trade balance, all of them mainly deal with foreign exchange funds by purchasing U.S treasury securities. And now the low yield rate of U.S treasury securities as well as continuous devaluation of U.S dollars brings about huge losses to these foreign exchange reserves which invest on U.S treasury securities. Together with the fact that USA deficit is caused by over-consumption of citizens (savings - investment gap) and government (fiscal deficit), which makes it extremely difficult to remove the deficit. (Jen, 2007)

Therefore, since it is difficult to change U.S dollar’s strong position in market as a central currency, what other countries can do now is to adjust their own rolling strategy of hedging so that they can protect their foreign exchange assets. Under such a situation, with the establishment of SWFs, those countries with foreign exchange reserves can expand assets reserve in the type of stock right and develop multi-channel investment, which is one of the effective options to maintain and increase the value of foreign exchange reserve assets.

3.2.1.3 The Positive Effect brought by Diversification in SWFs Investment on National Economy also promote its own Development.

First of all, a successful SWF can ensure domestic economy’s stable development, removing excessive liquidity, lowering the pressure from inflation, and reduce the level of domestic economy’s dependency on income from export of raw materials. For example, Russia’s Stabilization Fund is part of the budget funds of Russian Federation. And the basic function of Stabilization Fund is to insure economy by ensuring federal budget balance when oil price is lower than its underlying price.

Secondly, the portfolio in SWF internationalization and diversity can disperse financing risks thus maximize risk adjusted returns. To be specific, SWFs can be invested on various industries, multiple kinds of products and different types of countries， thus can share the benefits of world economic growth and also effectively reduce the dependency on certain economy or certain investment. For example, resource exporting countries is apt to develop heavy reliance on natural resources exports, which will centralize the risks. Considering resources will be used up one day and other factors, like exchange rate risk, government establishes SWFs to effectively avoid risks brought by purely depending on mineral resources to expand national wealth.

3.2.2 External Reasons

3.2.2.1 The Promoting Impact brought by international Production Transfer and Changes international Division of Labor

If the continuous increase in prices of resource commodities promotes the establishment of SWFs in Russia and oil producing countries in Middle East, international production transfer and changes in international division of labor are the essential reasons that promote the establishment of SWFs in non-oil-producing countries (especially those countries in Asia).

In 1990s, with the development of economic globalization, developed countries, led by America, accelerate the pace of industrial structure adjusting transferring. They transfer the production-manufacturing links in traditional manufacturing industry and high-tech industry, even some of the research and development activities, and service industry out of their own countries. The destination of the transferring is the emerging markets which have cost advantage, market potential and high ability to provide auxiliary items. More and more developing countries are being absorbed into global system of labor division and production chains which are led by transnational corporations in developed countries. Some areas in Asia, including China, have become global manufacturing and producing bases and export bases of finished products. Their ratios in global trade keep increasing, with export competitiveness being notably enhanced and trade surplus increasing continuously (Aizemann.2007). By July 2007, 2/3 of the global foreign exchange reserves concentrate on six countries and areas, which in order are China, Japan, Russia, Taiwan (China), Korea and India. The foreign exchange reserves held by countries and areas in Asia are ＄3.5 trillion. With huge sum of foreign exchange reserves, countries in Asia begin to become the main force in SWFs.

All in all, promoted by reform of new technologies, economic globalization becomes increasingly fierce and world economy develops rapidly. The foreign exchange reserves of emerging market economies and oil exporting countries keep increasing rapidly. Among ＄5.1 trillion global foreign exchange reserves, developing countries account for 73%, with eight of the top 10 foreign exchange reserves being Asian economy. However, the continuous by increasing foreign exchange reserves exceed the need of international settlements and under the traditional operation mode and foreign exchange control, the income received from investment is little. Therefore, SWF is established in time when governments of different countries ensure the liquidity of foreign exchange assets to gain more profits by seeking for long-term, reliable operative functions.

3.2.2.2 Financial Globalization served as A Bridge

Financial globalization promotes the financial cooperation between countries and accelerates the pace of financial innovation. Meanwhile, the elevation of openness degree of financial markets in different countries makes cross-border settlements possible. All of the above factors are good for capital liquidity, thus these factors offer far-ranging channels for the global operation of SWFs.

First, the appearance of financial derivatives largely increases the variety which financial capital circulates. The development of international financial market offers more options for foreign exchange assets to increase their value so that foreign exchange assets are not limited to purchasing foreign government bonds. Therefore, there are more options to lower risks and increase the probability of higher income when SWFs are used to invest.

Second, with financial globalization promoting the development of international investment, many countries adopt a series of measures to regulate international investment. International organizations also make a series of rules and regulations about international investments activities to make sure their stable operation which to some extent promote the orderly proceeding of investment by SWFs.

4. Case Study on the Investment and Operation of SWFs

This part conducts a detailed analysis of the investment and operations of Singapore's GIC and Temasek Holdings, the government pension fund in Norway, the federal social security fund in the US and other SWFs with distinguishable characteristics. It mainly analyzes the market-oriented mode of operation, the right of independent investment decisions guaranteed by law, the implementation of clear investment objectives and strict risk control, and the establishment of a reasonable performance evaluation and effective monitoring mechanisms.

4.1 Characteristics of Singapore SWFs Operation

Singapore SWFs include GIC and Temasek Holdings. The two SWFs have a clear division of labor in which Temasek Holdings focuses on strategic investments and GIC is to manage most of the overseas assets of the Singapore government. The main task of GIC is to invest in income securities, real estate and private stock, focusing on the diversified financial asset portfolio investment and pursuing the value preservation and increment and long-term returns of the foreign exchange reserves.

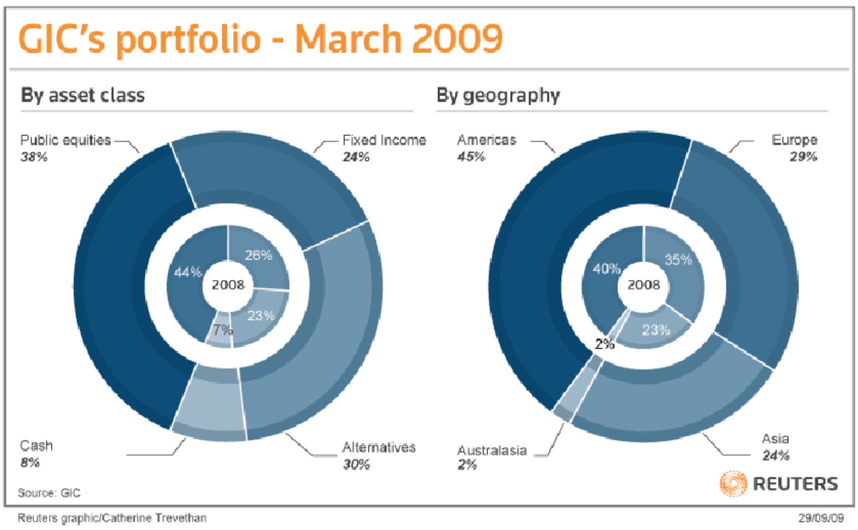
4.1.1 Characteristics of GIC's Investment Operation

On May 22nd, 1981, the Government of Singapore Investment Corporation (GIC) segregated officially from the Monetary Authority of Singapore (MAS) according to the Company Law. As a trustee, it is responsible for the portfolio management and diversified management on Singapore SWF, and operates most of the overseas assets of the Singapore Government. Currently the value of the assets under GIC management is more than 100 billion U.S. dollars. GIC has been among the world's top 100 fund management companies in the world. Its investment covers more than 2,000 companies around the world. The characteristics of its investment operation are as follows:

(1) Decentralization in investment field and assets allocation

GIC focuses on two tasks: risk dispersion and benefit promotion. It attaches great importance to the geographical distribution of investment. One major characteristic of it is that all its investments are overseas. GIC's more than 100 billion U.S. dollars of foreign exchange reserves investment covers more than 40 countries, among which the United States, Europe and Japan are the key investment market. Investment for the U.S. accounts for 45% of total assets, Europe 29% and Asia 24% respectively.

GIC disperses its investment in different assets to obtain diversified investment portfolios. It divides investment field into nine categories, which are the long-term, high-risk, high-return assets such as the blue chip, real estate and private equity investment. And they are managed by its subordinate public market investment sector, GIC real estate Inc. and GIC direct investment firm respectively. In recent years, the proportion of hedge funds and commodities investment has increased. Since different assets have different rate of returns, GIC attaches more importance to the overall benefits of portfolio rather than seeks for high return from several assets. Currently, half of the assets in government investment companies are used for security investment, another 20% to 30% for bonds and the rest are scattered in private fund, real estate, merchandise and so on. See Figure 6.



Source: SWF Institute

Figure 6: Asset Allocation and Regional Distribution of GIC

(2) Rationalization of investment strategy

The GIC investment strategies include incremental investment, decentralized investment and principal investment.

GIC's initial foreign exchange reserve is only several billion Singapore dollars. Its subsequent development mainly depends on its own rolling profit and the continued accumulation of the foreign exchange reserve in Singapore. Due to its long time span, the incremental investment strategy GIC pursues almost doesn't cause any impact on the international market. In addition, GIC adheres to the principle of decentralized investment. To reduce investment risks, it requires that the ration of a single asset should account for no more than 10% of the total investment. Currently, GIC invested in more than 2,000 companies in more than 40 countries, nine categories of assets and almost all world major currencies. This highly decentralized, diversified portfolio can well resolve the impact on the overall market which caused by the increase or decrease of a particular asset in one's hand. GIC not only directly manages its own SWF in Singapore, but also entrusts some of the assets to some external professional investment management organizations, or manages with those external institutions jointly. The fund principal GIC and the fund agent gain their profits on the basis of a certain percentage. The agent charges a certain percentage of the fund management fee to maintain its normal operation.

(3) Internationalization of performance evaluation

GIC is the fund manager of the Singapore government SWFs and is responsible to manage its vast foreign exchange reserve assets. The performance of government investment companies not only takes relevant international indicators as its standards, like Morgan Stanley Capital International Corp. stock index, etc., but also compares with similar institutions in other markets. Since its foundation 27 years ago, GIC has achieved an average annual rate of return of 9.5% (in U.S dollar), and the average rate of return is 5.3% excluding inflation.

(4) Standardization of risk control system

GIC has a normative and mature risk control system. First of all, the investment decision of GIC emphasizes the “risk veto” principle, which means only when the risk related to the new investment can be fully recognized, confirmed and withstood, and when GIC has the ability to measure, assess, manage and control this risk can it make an investment decision. In recent years, GIC further emphasized three aspects in risk controlling: the direct involvement of the high-level managers in risk control; emphasizing on reducing the risk correlation between different investment strategies; more attention on using econometric model to make asset allocation and risk assessment.

4.1.2 Operating Characteristics of Temasek Holdings

Temasek Holdings (private) limited company is a wholly state-owned holding company operated by Singapore Ministry of Finance. In its initial establishment in 1974, its 35 companies (Temasek associated company) only did business in the local area and its total asset was only 350 million Singapore dollars. In October 2004, this company announced its financial statement of 2003 for the first time.[23] The report showed that its total asset has reached 90 billion US dollars, and it had an equal enterprise scale with U.S General Electric, Germany Siemens and other large companies. Since its foundation over the 30 years, Temasek’s annual average net asset return rate has exceeded 18% and the dividend payment rate of state shareholder has exceeded 6.7%. As a large wholly state-owned holding company, Temasek’s operating performance has exceeded that of the private enterprise significantly in the same period. Standard & Poors, Moody’s Investment Service and other famous credit rating agencies all gave it the top credit rating. The main characteristics of Temasek investment and operating mode are as follows:

[23] Temasek never made public financial report since establishment on September 2004, so it is considered to be the most mysterious enterprise in Singapore

(1) Independent market-oriented operation

The key reason why Temasek became the "profitable legend of global state-owned enterprises" lies in its inherited managerial concept of "operation based on market principle". It integrates "state-owned investment subject" with "market competition subject" in its actual operating. Independent market-oriented operating mode and a clear relationship with government made Tamasek's success in investment. Although wholly-owned by Singapore Ministry of Finance, Temasek's operating target is simply pursuing the return rate of business investment, and generally the government won't interfere with the normal business operations of enterprises. The board of directors in Temasek acts as the property representatives of the government, it has a highly autonomy right. All business of company are operated by board of directors according to the market standard. Also, its business indicator, motivation mechanism is also market-oriented rather than administrative. Except that the investor is government, its operation mode is the same with that of private enterprises. They have equal status so that it avoids some disadvantages in state-owned enterprises such as official standard system and low efficiency. As a wholly state-owned company, on the premise of properly considering government's industrial policy, Temasek was market-oriented. Every investment project must be evaluated beforehand and take profit as management purpose and performance indicator. For some special performance requirements proposed by government, Temasek also takes it into market-oriented evaluation process. If these requirements must be implemented but they would bring some loss, the government should give appropriate financial compensations to Temasek. And if the board of directors in Temasek considers government's interference is unreasonable, they have the right to reject.

(2) Wide investment field and varied investment mode

Temasek positioned itself as other major private equities that it should have its own investment regions and industries. As for regional investment, since Temasek's foundation, its investment in Singapore has decreased gradually and has developed all over the world. And the proportion of its domestic investment reduced from 78% before 2000 to 44% now. Temasek's long-term target is the so-called "three-three-three" programme, which means one-third of its investment is in Singapore; one-third in OECD; and one-third in Asia. Only an investment strategy like this is able to take consideration of regional risk, and meanwhile separate itself from the major market in Singapore boldly to develop promising emerging markets. As for industrial investment, it seeks the principle of dispersion and invests in finance, telecommunication, transportation and many other industries. This investment mode is also good for getting high profit from rapidly growing industries.

Temasek focuses on direct investment, which is just like a strategic investor. Since its foundation, its annual average net asset earning rate has reached 18%. Since 1990s, Temasek use foreign exchange reserves to invest in international financial industry and high-tech industry. Its biggest individual investment field is financial service industry, in which the commercial bank becomes the core of its investment strategy. Temasek's investment includes communication and medium, financial service, real estate, transportation, energy, infrastructure, engineering technology and biological technology. Among these the biggest three investment fields are financial service, communication and medium as well as transportation. They respectively accounts for 35%, 26% and 13% of the total investment amount.

(3) Diverse and dynamic management mode

The separation of investment subjects and decision makers has formed the basic features of Temasek's asset management. Ministry of Finance is Temasek's sole shareholder, but its main members of the board of directors are independent directors. Temasek and other investors adopt the method of active shareholders, which means exercising their rights through timely and complete financial reports. It supervises its subordinate enterprises strictly in accordance with market rules and almost doesn't interfere with the decision-making of the investment policy by its subordinate enterprises. These decisions are made by the management team of the subordinate enterprises and supervised by their respective board of directors.

Temasek continuously adjusts the management mode of its subordinate associated enterprises according to different periods and market development. Among them, the privatization of associated enterprises is Temasek's adjustment to the market development recently. To purposes are as follows:

- National financial reserves can be accumulated
- Listed companies can have a variety of options to improve the company's financial position while raising funds
- Improve the company's reputation and encourage the company improve its management level continuously
- Allocate national wealth to the general public by making them buying the stocks issued by its associate companies
- Share the risk of opening up a new business by Temasek
- Make the government fade out from operating activities. Temasek conducted the privatization mainly through corporatization, public listing and selling.

(4) Performance evaluation & internal and external oversight are in place

In accordance with relevant rules, the Temasek does not need to publish its financial data, but it must submit its audited financial statement to Ministry of Finance. And Ministry of Finance checks Temasek's operating performance based on this financial statement.

The board of directors of Temasek not only accepts the external oversight, but also implements internal oversight on its own business. There are four means to implement external oversight:

- The government sends people to participate in board of directors directly
- Monitor the company's major decisions through financial reporting and project approval system
- Irregularly sent people to the company or its subsidiaries to investigate the

situation

- Supervision by public opinion.

Singapore has strict anti-corruption laws and regulations, in addition to the Anti-Corruption Bureau which is in the direct responsibility of the president supervises the official activities of civil servants, the government also encourages the media to publicly exposure the behavior of the embezzlement of state property and corruption through misuse of law. Meanwhile, the company established a system of internal monitoring and control mechanism. Its internal monitoring function is in the direct commitment by the board of directors. And the board of directors has an internal audit committee which is responsible for the financial audit in the company. Such a audit reporting system ensures that the management and operation of the state-owned assets is strictly monitored by the head office and the government so that it can avoid mistakes in some important investment decisions as possible as they can.

4.2 The Operating Characteristics of GPFG

The Government Pension Fund Global was established with oil export revenue of the third-largest net oil export country by the Norwegian Ministry of Finance in 1990. According to the data released by the end of 2007, its asset was nearly up to 400 billion U.S dollars, which made the scale of its SWF be the first in Europe and the second in the world. In January 1998, the Norwegian Oil Fund was renamed GPFG. At the same time, it started to recruit overseas investment managers and the stock and non-government guaranteed bonds also have been allowed as investment instruments. Under the background of high oil prices, the Ministry of Finance will allocate oil revenues as the new capital at the end of each month so that the Fund has a steady stream of additional capital. According to prediction of NBIM, the fund value will be more than 560 billion U.S. dollars in early 2010 and may exceed 860 billion U.S. dollars in early 2015. The characteristics of the investment and operation of GPFG are as follows: (Lyons, 2007)

(1) The administrative organization and asset management structure

GPFP is administered by the Ministry of Finance in Norway. Similar to Singapore, the Norwegian Ministry of Finance occupies an important position in management decisions. The Norway Central Bank is the agency. As the direct fund manager, Norway Bank Investment Management Company has about 178 regular employees and is responsible for part of the operation of investment funds. At the end of 2007, there were 25 professional stock investment agencies and 22 fixed income management agencies employed as overseas investment managers respectively. These managers should also follow the investment strategy in the asset management formulated by the Norwegian Ministry of Finance. All along, the fund has been limited to overseas markets. In addition, its share proportion in each company is usually small so that these companies will not feel the threat posed by the investment, and thus welcome its shares. The specific comparison of asset management structure of GPFP is in talbe 3

	Proportion of assets management		Proportion of management costs		Proportion of assets risk	
	2006	2007	2006	2007	2006	2007
Internal assets management	78%	83%	39%	36%	40%	46%
External assets management	22%	17%	61%	64%	60%	54%

Source: Homepage of GPFP

Table 3 Comparison of Asset Management Structure

(2) The evaluation standard of the investment portfolio

As the management organization of the fund, the Ministry of Finance in Norway set an evaluation standard on the global pension fund portfolio at the beginning, that is the yield spread between the actual portfolio by NBIM and the benchmark portfolios in requirement of Ministry of Finance become the best standard to evaluate GEPE. And this indicator is called extra return, which means the difference between the final actual asset and expected asset. In the past 10 years, its annual average rate of return has been 6.5%. Except for the year 2006, it all exceeded its Benchmark portfolio. According to the NBIM official website, currently 40% of the Benchmark portfolio is stock investment, while the rest is the fixed-income product. The regulation on the benchmark portfolio by the Ministry of Finance provides a very good indicator for GPFG performance evaluation, but it also has a higher requirement on the management organization of SWF.

Norwegian Ministry of Finance has a certain limit on investment area, in which the European market is the focus of portfolio. For example, as for the regulation on the related stock investment, the investment ratio in Europe is 50% of the total stock investment, and in America and Africa it is 35% and 15% respectively, while the investment ratio in Asia and Oceania, it is 15%. In the bond market, the investment ratio in different bond markets is 60%, 35% and 5% respectively. And 60% of the fixed income of the global government fund is concentrated in Europe.

(3) Information disclosure system

Norwegian government considers that the transparent management of the fund would give pressure to managers, and meanwhile it may promote the stability of the global financial market. As the biggest stockholder in Europe, Norwegian global pension fund lists its all 3500 items of investment on its website. The Norway Central Bank presents a report on income and cost of the oil fund to the Ministry of Finance every season and issues detailed fund operation report annually. These reports provide some data as follows: the overall return rate of the fund, the benchmark yield rate, the source of the above-average return and fund management cost. They also include how the fund is managed and the detailed list of foreign companies which received investment from the fund. The annual report also covers investment proportion of each industry and each region, the timing and reason of adding storage, experts' descriptions and choices of the investment concept of the oil fund, employment procedures of external managers and so on. An independent company employed by the Ministry of Finance did decomposition analysis of the differences between fund income and benchmark income based on the data provided by the Norway Central Bank. The report of this company and the report of the Norway Central Bank were both publicly displayed on Internet.

The Oil fund is audited by Norwegian General Audit Office. The General Audit Office is nominated by Norwegian Parliament and reports the condition of the fund operation to the Parliament to guarantee the Parliament's control on fund. Because the information is disclosed openly and timely and the supervision is strict, GPFG is regarded as the most transparent sovereign fund by public.

(4) Supervision Mechanism

At the end of 2004, Norwegian government established Council on Ethics, which is a function sector that not exists in other SWF, especially to help the Ministry of Finance to supervise fund operation more comprehensively. This council consists of 5 members and it made work regulations and duties in agreement with the Parliament. It usually represents a supervision report to the Ministry of Finance annually and has a real-time monitor in investment to guarantee that they obey all international statutes. Council on Ethics listed a series of prohibited investment objects such as weapon production, environment destruction and the investment violating human rights or corruption and degeneration. All these will be reported to the Ministry of Finance and given rejections. The power of the council is as great as the fund owner—the Ministry of Finance. The work regulation shows that this council has the right to require NBIM to provide all information and NBIM must implement suggestions that proposed by the council. This policy not only represents a significant feature of GPFP but also shows the praiseworthy ethic standard of GPFP trustors.

4.3 The Characteristics of Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds' Investment and Operation

In August, 1935, the U.S. Congress passed the first social security law in U.S. history — *The Social Security Act*. Since then, the U.S. has started to establish the social security mechanism. The U.S. government extracts a certain percentage of social security taxes from the salary of the employers to establish government pension fund, which are used to subsidize the retired, the survived and the disabled to guarantee their basic needs of life. That is the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds and the OASDI is its short name. Its nearly 2 trillion dollars' assets almost equal to the sum of global SWFs. According to the annual report released by the OASDI Council on May 1, 2006, the total asset value of the OASDI has reached about 1.9 trillion U.S. dollars in 2005 which occupies 12.8% of the GDP in the same year. As we estimated, 159 million Americans have benefited from the Federal Government Pension Fund, and this figure has included almost all adult citizens. Characteristics of its investment and operations are as follows:

(1) The legal and regulatory system

According to related regulations, the U.S. government pension fund has an extremely strict regulation. Compared with various U.S. financial investment institutions, the OASDI takes the most prudent and conservative management method which is implemented in a very strict way. In the more stringent laws and regulations, the U.S. provides some regulations to the publication of relevant information, such as the periodic financial report and the notice for fund usage, so that the pension fund is placed under public supervision. In addition, the 664th section of the *United States Federal Penal Code* contains the penalty provisions of "embezzlement crimes of the government pension fund and welfare fund", in which the penalties for offenders are very severe. The U.S. government and the Social Security Guarantee Office has a strict management on OASDI. The public and government are all extremely responsible for the OASDI. Legal constraints ensure that the funds will not be embezzled and will have a safe and steady value increment. It is in the constraints of such laws and social environment that the cases of OASDI misappropriation or corruption have not yet occurred.

(2) The administrative organization and its functions

The OASDI Management Committee is composed of six members, of which they hold posts automatically in accordance with their positions in the federal government. They are Minister of Finance (Management trustee), Minister of Labor, Director of Health and Director of Social Security. The other two members are appointed by the president and approved by the Senate to have a term of four years. The responsibilities of the Council is to be in charge of the trust fund, assess revenue and expenditure of the OASDI, mastermind the tasks about decisions of investment direction and management, represent annual reports on balance situation of the OASDI to Congress, make short-term (less than 10 years) and long-term (less than 75 years) prediction of the fund, and propose relevant plans on the OASDI's investment based on these predictions. Specifically, the Minister of Finance should be responsible for all investments in the Fund and ensures that the asset which is dispensed with currently will be invested in interest-bearing bonds or guaranteed bonds. Trust Fund should invest in strict accordance with the provisions of the U.S. government and the investment data have to be published monthly.

The various accounts of the OASDI are directly set up in the Ministry of Finance. It also made special management by the Ministry of Finance. The collected money should be deposited into various funds accordingly, rather than goes to the general financial accounts. As a special account for the government pension, the OASDI is managed by the Government Pension Fund Council which is affiliated to the Ministry of Finance. Currently, 72% of the OASDI is used for the payment of the government pension, while the rest are used for savings and value-added investment.

(3) Prudent supervision mode

The investment activities of the OASDI adopt prudent supervision mode, which means the fund is supervised according to the principle of prudent. The supervision organization does not make any quantitative requirements on the specific arrangement for the fund asset, but requires that investment managers take various risk factors into account when they make each investment like “a prudent men” managing their own assets. To some extent, this can increase the security of financial operations.

(4) A strong awareness of investment risks

Although the U.S. advocates economic freedom and market openness, the U.S. government has a strong awareness of risks in the OASDI investment. It is clearly stated in the U.S *Social Security Act*: the OASDI can only be invested in the “sin-based income securities” which the U.S. government has guaranteed both its principal and interest.[24] In other words, according to this law, the OASDI should not only be operated by the federal government intensively, but also its revenue and expenditure savings should be invested in securities with both principal and interest that is under the federal government’s guarantee. Furthermore, the interest it gained should also be deposited in the fund exactly. In this way, according to laws, the U.S. government can ensure that the OASDI will not be used to purchase stocks, or entrust investment, or invest in the real estate development and other aspects, which reflects its strong awareness of investment risks.

In the past 70 years, the OASDI has invested all its balance to the federal bonds according to the *Social Security Act* and never steps over the perimeter, buying government bonds with all its earnings every year.

All in all, the setting of the supervision organization, the function arrangement, investment principles etc. of the OASDI truly reflect the three important principles of the fund risk control in the investment management. They are comprehensiveness, independence and equality.

[24] "Social Security Act" paragraph 201 (d); "United States Code" paragraph 3111

4.4 Discussion of the Operating Experience of SWFs

Through the analysis of the above-mentioned SWF operation, now we can summarize its successful experience as follows:

4.4.1 The Implementation of the Market-Oriented Mode of Operation

The market-oriented mode of operation can minimize the administrative interference. The successful SWFs such as Singapore's GIC, Norway's GPFG, Abu Dhabi Investment Authority etc., have committed to follow the example of the organizational form of private investment companies, which highlight the core decision-making functions and autonomy in the board of directors and the professional investment committee and pay attention to the streamlined and efficient decision-making in the organization. Among them the corporate governance in Singapore Temasek Holdings has been widely recognized.

As a government-funded commercial institution, it is not easy to find the balance between government targets and business interests. This is not only a successful experience for Temasek, but also a lesson which government-funded enterprise in other countries should learn from. On the one hand, Temasek as a Singapore state-owned asset management agency, its development strategy is entirely based on the needs of national economic development. On the other hand, as an investor and shareholder, Temasek Holdings actively participate in the governance on its wholly owned or share holding corporations. Its investment and withdrawal are all based on its judgment of the commercial interests, committing to increase the long-term shareholder value. From this perspective, Temasek is a company which strictly observes the commercial principles. Standard & Poor and Moody keep giving Temasek the highest rating AAA, which is an affirmation on Temasek's market operating mode.

In addition to some internal investment management, some SWFs also entrust some of their capitals to EFM. This approach on one hand can fully takes advantage of their professional competence, on the other hand it can reduce the systematic risk of the asset management. For example, by entrusting to the EFM, internal management of GPFG only assumed 39% of the related risks in 2006.

4.4.2 Independent Investment Decision-Making Power

The developed countries learnt a lesson from the practice of the government pension fund management: the government intervention in the fund management often leads to low efficiency of social securities, and often becomes an excuse to contest on the low efficiency of the performance for some management organizations, resulting in unclear management responsibilities. To avoid such problems, the legislative institution makes clear the responsibility of the management organization by relevant laws. Meanwhile it gives those management organizations independent decisive powers on investment to avoid government direct intervention on investment decisions and the specific operation.

4.4.3 The Establishment of Clear Investment Objectives

Every investor at an early stage of investment will set an investment objective for himself. Usually, investment objectives will be set according to the utility maximization, which means maximize utility with a given level of risk or minimize risks with a given income level. Portfolio is mainly composed of securities, and gains mainly come from current income and capital gains. The core of portfolio is to reduce non-systemic risks through diversified investment. In the investment sector and industry, because of the influence of scientific and technological development and macroeconomic fluctuations, the rise and fall of industries and sectors will occur alternately, and thus sunrise industries appear and sunset industries die out. Therefore, in the security portfolio composition, the industries and sectors must be properly distributed.

Singapore’s two sovereign funds have a clear division of labor, in which Temasek Holdings focuses primarily on strategic investments, while GIC focuses on the financial portfolio. The investment field of GIC includes not only the government bonds of United States and Europe, but also stocks, fixed assets, money market securities, real estate and special investment projects. Temasek Holdings in Singapore at first was only responsible to manage state-owned enterprises, but now it is widely invested in international financial and high-tech industries. In recent years, with the rapid development of economic regionalization and globalization, Temasek constantly adjusts its development strategy and investment objective according to the changing situation. It has principles of internal and external collocation and the collocation between the region and international economic development to balance portfolio and spread investment risks to the largest degree.

A typical one is the Norwegian GPFG. The investment management of GPFG has the investment strategy of pursuing high return in the premise of risk moderation. Norwegian Ministry of Finance prescribes that the year yield of the investment benchmark portfolio should be 4%. It also makes a provision for the category of the fund investment and geographical distribution of the benchmark portfolio: At first it is only allowed to invest in interest-bearing instruments, and then it is given 20% of the investment interest in equity interest. After getting some experience, the proportion will be gradually raised to 40%. Furthermore, 60% is to the purchase bonds (of which the European market accounts for 50%, America and Africa 35%, and Asia and Oceania 15%).

The use of the GPFG in foreign countries mainly refers to put part of its funds into the capital market and have a market-oriented operation, generally focusing on investment varieties which have a higher safety. On one hand, on the basis of full risk diversification, raise rate of return on investment; on the other hand, provide long-term, stable funding for the capital market. However, due to the particularity of the GPFG and the investment security which every country considers in the first place, the investment products and investment ratio are both stringently restricted to raise the investment income in the premise of controlling the investment risk.

4.4.4 The Implementation of strict Risk Control

International investors will face a variety of risks. On one hand, risk management is to minimize the absolute risk; on the other hand, it is to match the returns with risks. For example, Temasek sub-divided risks into strategic risk, financial risk and operational risk, and coped with the risks according to different sources.

The government pension fund also faces many risks in investment, such as investment managers' moral risks, investment decision risks, portfolio risks, investment and transaction risks, information system risks and so on. The scale of the foreign government pension fund is so huge that once an investment occurs, it will cause serious consequences. Therefore, the investment managers usually have a strong sense of risk management. From the point of view of management, it mainly takes the following two methods:

(1) Strengthen information disclosure and improve the operational safety of the government pension fund. Mandatory information disclosure system, which is a market infrastructure confirmed by the theory and practice in recent years, has always been paid attention to by developed countries. Strict information disclosure system will enable the government pension fund managers, investors and other parties to obtain the fullest information as much as possible to reduce the risks and loss caused by false or incomplete information. The Norwegian GPFG has earned a good reputation for its timely public disclosure of information and strict supervision and it is considered as the most transparent SWF.

(2) Protect the paying ability of the government pension fund through legislative mechanisms. The U.S. relevant laws have strict constraints on government pension fund's investment to form the legal escort to avoid risk. The U. S. "*Social Security Act*" sets very strict requirements on the duties, functions and conduct standards of trustees to help the U.S. government ensure that the government pension fund shall not be used to purchase stocks, or entrusted investment, real estate and other

investments.

4.4.5 The Establishment of a Reasonable Performance Evaluation

The performance evaluation of the portfolio includes asset allocation, weight of security asset categories and the choice in security asset categories, together is an overall performance evaluation. Comparing the real rate of return of portfolio with the expected return rate, we can determine the effectiveness of investment portfolio so that we can identify defects in investment and improve the investment which doesn't have a good return, making it not only to be a method to judge the investment management value, but also a feedback mechanism to improve the investment management process.

Singapore's GIC pointed out in its investment objective that from a long term perspective, the investment should be higher than the real rate of return of G3 (U.S. dollar, euro, yen) inflation. And South Korea KIC set different evaluation criteria for assets in different regions, such as the investment reference standard of the Large-cap stock in the U.S. stock market is the S & P500 index and the investment reference standard of the Canadian stock market is the S & P / TSX Capped Compoite index. Furthermore, the South Korean KIA set a evaluation criterion on the alternative investment products: For private equity, its reference standard is the global index of S & P1200; for real-estate, its reference standard is the Swiss bank's global real estate index; for hedge fund, its standard reference is the commingled funds index of the HFRT1 Fund.

OASDI investment follows the four interrelated principles, establishing a reasonable performance evaluation: Never invest in stocks; only invest in safe and reliable financial instruments (bonds); guarantee the neutrality of the OASDI and other funds of the Ministry of Finance in financial transactions; guarantee management trustee participate in (or not participate in) the decision-making on investment and management policy. In short, they are called "the characteristics of not entering the stock market, no risk, a high degree of independence and anti-interference."

4.4.6 The Establishment of an effective Supervision Mechanism

After it entrusts some of its responsibilities to agencies and investment managers, the management organization as the responsible subject of the fund management and operation, should oversee the specific operation of the Fund, including examine whether the actual operation is consistent with investment policies, evaluate investment performance, audit financial accounts etc. This is an important part of its responsibilities and an effective monitoring mechanism is the key to guarantee the capital safety and improve operational efficiency. At the same time many countries establish an effective monitoring mechanism through the establishment of specific legal system. For example, Singapore established the "two key" system to protect critical assets and foreign exchange reserves. It prescribes that President of Singapore has the veto power to the decision on foreign exchange reserves which the government use or reduce. The appointment and removal of key senior managers in Singapore Government Investment Corporation and Temasek Holdings must also be approved by the President of Singapore. Singapore GIC established Singapore investment committee, risk committee and compensation committee to monitor the related activities and provide the board of directors with reasonable suggestions on investment matters.

5. The operation of China's sovereign wealth fund

5.1 Overview of China Investment Corporation

China Investment Corporation (CIC) was officially established on September 29th, 2007. The macro background of its establishment was: the sustainable double surplus in balance of payments and the open market operations of the People's Bank of China to keep the RMB against the U.S. dollar exchange rate relatively stable. These two factors jointly led to soaring foreign exchange resources. CIC was established as a wholly state-owned company under the Company Law of the People's Republic of

China with the issuance of special bonds worth RMB 1.55 trillion by the Ministry of Finance at the end of June, 2007. These were, in turn, used to acquire approximately USD 200 billion of China's foreign exchange reserves. Currently, it is engaged in the foreign exchange investment business based mainly on foreign financial investment portfolio products. CIC has set up a comprehensive corporate governance structure including Board of Directors, Board of Supervisors, and Executive Committee with the implementation of the separation of government function from enterprises management, independent management and commercialized operation. In the context of acceptable risk, it aims at maximizing return on long-term investment income. CIC's market position can be describe as follows: firstly, based mainly on foreign financial investment portfolio products and carry out diversified investment to increase long-term gains of foreign exchange assets; secondly, inject capital to domestic financial institutions and carry out the duties of investors according to law to achieve the preservation and appreciation of state-owned financial assets.

Since the establishment of CIC, Central Huijin Investment Company Limited injected into the company as the wholly owned subsidiary of CIC. Central Huijin independently sets its own board of directors and the supervisory and is responsible to invest and hold equity of the state-owned key financial enterprises. It also exercises the shareholder's rights on behalf of the State Council, but never takes part in the other commercial business activities or interferes with the daily business activities of its holding companies (Feng, Huo, 2008).

On August 7, 2009, CIC released the first annual report[25] after its establishment. The report[26] showed that by December 31, 2008, CIC had a net profit of 23.13 billion U.S. dollars. In 2008, the rate of return on CIC global portfolio (overseas investment) was -2.1%, the rate of return on corporate capital was 6.8% and the rate of return on corporate capital was 11.7% if calculated by the equity method. The report also

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[25] First annual report published by CIC: http://www.chinasecurities.xinhua.org/xwzx/jsbd/200908/t20090807_2175454.htm

[26] Annual report of CIC about 2008 http://www.china-inv.cn/include/resources/CIC2008annualreport.pdf

showed that, in the company's 200 billion U.S. dollars' registered capital, the foreign investment was slightly more than 50%, and the rest was invested by Central Huijin in domestic financial institutions. In 2008, the net profit of CIC was mainly from the equity investment income from Central Huijin's domestic financial institutions. The interest income, the dividend income, the income by trading price differences, long-term equity investment income, income from changes in fair value, and the exchange gain or loss contribute to the investment income up to 4.087 billion, 248 million, 500million, 26.253 billion, -6.516 billion, -167 million, respectively.

Meanwhile, the overseas investment of CIC undoubtedly attracts more attention of the public. Report showed that the rate of return on CIC global portfolio was used to measure the overall global portfolio return, including accomplished gains like interest, dividends and other unrealized gains like income from changes in fair value. In 2008, the rate of return of global portfolio investment was -2.1%, which meant that its overall performance was better than other SWFs, university endowment funds and pension funds.

5.2 The Analysis of CIC Investment Technique

(1) The source and scale of the fund

In 2007, the Ministry of Finance issued 200 billion U.S. dollars special national debt and established CIC after the exchange of the foreign exchange assets between Agricultural Bank of China and Central Bank. Li yong, the vice minister of the Ministry of Finance and the non-executive director of CIC once said in public that as for the structure of the CIC capital usage, about 1/3 of the 200 billion U.S. dollars' capital was invested in Central Huijin, 1/3 was injected into the Agricultural Bank of China and China Development Bank, and the other 1/3 was invested in the global financial market. That is to say, the amount of money CIC used in the overseas investment was about 67 billion U.S. Dollars.

(2) The investment Strategy

In 2007, Lou Jiwei, the chairman of the board in CIC said at the listing ceremony that CIC would foucus on overseas financial portfolio products to achieve the maximization of long-term gains of the foreign exchange asset. And meanwhile, CIC would continue to inject to domestic financial institutions and perform the duties of investor representative in accordance with the law. He also said that CIC had two purposes: One is to get reasonable long-term gains within the pales of acceptable risks, and the other is to improve the corporate governance of financial companies under its stock controlling. Therefore, currently CIC positions itself with the mixed investment strategy, among which the investment of “overseas financial portfolio products” belongs to portfolio investment strategy, while “the injections into domestic financial institutions” and “improvement of the corporate governance of financial institutions under its stock controlling” are belong to strategic investments.

The mixed investment strategy of CIC is determined by CIC’s congenital structure, which means that CIC as the parent company wholly owns Central Huijin, Jianyin Investment Securities and the subsidiary (or division) built specifically for overseas investment. Among them, Central Huijin still exercises the shareholder’s rights on behalf of the State, intensively manages financial assets like domestic banks, security firms, trust fund etc. And Jianyin Investment Securities becomes a comprehensive company dealing with non-performing assets, while the overseas investment subsidiary is solely responsible for the foreign investment. Central Huijin under CIC’s stock controlling is responsible for injecting into the state-owned commercial banks and obtaining holding rights. Jianyin Investment Securities owned by Central Huijin is responsible for the injection and transformation of those to problematic security firms. The above two investments are typical strategic investment which are also very important for Chinese government in the policy-based task to reform commercial banks and security firms. And the overseas investment subsidiary of CIC is responsible for the overseas financial asset portfolio investment. The CIC also plays two roles of domestic policy-based investment and overseas market-oriented investment at the same time.

(3) Investment tools and scope

CIC invests primarily in equity, fixed income and alternative assets in foreign markets. The investment region covers markets both in developed and emerging countries. Alternative assets investment mainly includes private equity investment, hedge funds and real estate investments. With the help of a well-known international consulting firm, CIC has passed the strategic asset allocation programs which can be divided into 7 major categories and 16 minor categories. The program involves traditional assets and alternative assets and aims at long-term investment (Xin, 2007).

In May 2007, CIC made its first investment before its formal establishment. It has spent three billion U.S. dollars in buying 10% of America Blackstone Group's shares before the group was listed. Then CIC bought Central Huijin from the State Administration of Foreign Exchange at the price of 67 billion U.S. dollars in October, spent 1.1 billion U.S. dollars in subscribing H shares of China Railway Engineering Corporation in November and 5 billion U.S. dollars in purchasing 9.9% of the shares of Wall Street investment bank Morgan Stanley in December. In March 2008, CIC has invested 200 million U.S. dollars to Visahic. in its initial public offering (IPO) in the United States. The above are investment projects which have been identified.

Major Direct Foreign Investment (Public)

Company	Country	Industry	Ownership	Comments
GCL-Poly Energy Holding Limited	Hong Kong	Polysilicon Supplier	20%	
Teck Resources Limited	Canada	Mining	17.2%	
AES	United States	Energy	15%	
The Noble Group	Hong Kong	Commodity	14.9%	
SouthGobi Energy Resources		Commodity	13%	
JSC KazMunaiGas Exploration Production	Kazakhstan	Gas	11%	
Blackstone Group	United States	Financials	9.9%	9.9% was a $3 Billion Purchase, Set to purchase up to 12.5%
Morgan Stanley	United States	Financials	9.9%	
Visa	United States	Financials		Around $100 Million from the IPO

Major Direct Foreign Investment (Private)

Company	Country	Type	Ownership	Comments
JC Flowers PE Fund	United States	PE Fund	80%	$4 Billion US PE Fund

Source: SWF Institute

Table 4 CIC's Investments

(4) Investment operations

In addition to the local autonomous investments, CIC mainly entrusts the external fund managers to invest overseas. The external fund managers will be recruited publicly and directionally. The recruitment criteria are:

- The financial stability and good credit are necessary, and the risk control indicators should meet the requirements of the national or regional laws and supervision organizations.
- The job applicants have been engaged in asset management business for a certain number of years and the assets they managed have reached a certain scale.
- The employed should meet the qualification requirements of the living countries or regions.
- The employed should have a sound management structure, a perfect internal control system and a normative code of management.

- The employed have not received any serious punishments from any supervision institutions in the living countries or regions in the last three years.

To ensure the fairness, justice and authority in the recruitment of external fund managers, the selection process is divided into the following phases: application, initial evaluation, re-evaluation, premium rate negotiation and contract negotiation. CIC conducts the first selection according to the application documents provided by the applicant, the interview situation and the quotation for the management rate, etc. The final appointed list will be determined after the collective re-evaluation by the internal and external experts. This selection mechanism is in line with the basic national conditions that there are insufficient experience and shortage of advanced talents in the international investment market. First, part of the assets will be entrusted to the Asset Management Companies with international popularity by entrusted investment. Then with the accumulation of experience in risk management, CIC increased the proportion of self-operation, which is conducive to selecting the superior and eliminate the inferior, thus ensuring the quality of fund managers. In addition, it can also help to show the world the commercialization and market-orientation of China's SWFs so that the problem of transparency can be passed on to the external fund managers more effectively.

(5) The supervision institution

Following the Board of Directors and Board of Supervisors, CIC also sets three Executive Committees, namely the International Advisory Committee, the Investment Executive Committee and Risk Management Committee, each of which performs different functions. The International Advisory Committee is an internal non-permanent institution composed of internationally renowned experts. It provides consultations for company's significant development strategy, overseas investment strategy and vital decision-making; enhances the company's understanding on international politics and economic situation, global financial markets and the investment environment to widen the view of decision-making. The Investment Executive Committee approves the strategic asset allocation programs and asset allocation rebalance programs in accordance with the investment policies, objectives and procedures decided by Board of Directors and the Executive Committee; decides the investment scope and authority of each investment sector, approves the investment issues submitted by each sector within the mandate of the Executive Committee; regularly hears the implementation reports of investment plans and approves the alternation of investment plan; exercises other functions on investment management authorized by the Investment Executive Committee. The Risk Management Committee considers the strategies, systems and policies of the corporate risk management in accordance with the risk management requirements made by Board of Directors and Executive Committee; examines and approves the company's overall risk limitations and distribution programs, the comprehensive risk management reports and risk assessment reports, the evaluative criteria, management systems and internal control mechanisms of significant risks, events and business processes; regularly assesses the risk profile of company's asset allocation and implementation of the risk limitations; examines the risk management strategies and solutions to major risk events; approves other relevant major issues of risk management authorized by the Executive Committee. The Risk Management Committee is directly responsible to the Executive Committee and is composed of CEO, COO, CRO and directors of concerned departments.

(6) Risk supervision and performance evaluation mechanism

The aim of controlling investment risk is to ensure that investment activity operates orderly in acceptable risk range through implementing positive risk management to achieve maximum interest of stockholders. This includes not only bearing and managing risks which can bring investment profit, such as market risks and credit risks, but also avoiding and reducing risks which can not bring profit, like operation risks.

CIC determined risk preference and risk tolerance based on the features of its own investment mode, established risk budget and implement overall risk management system and internal control system which based on internal controlling framework COSO (Committee of Sponsoring Organizations) standard.[27] It also established risk management organization system which included Executive Committee, Risk Management Committee, Chief Risk Officer, Risk Management Department, Legal & Compliance Department and other related departments to avoid operation risks efficiently and ensure the company operates legally, regularly and steadily.

The performance evaluation mechanism of one fund is better to be single. But because CIC implements mixed investment strategy, it is not likely to use single evaluation mechanism to evaluate all business. For example, capital injection to state-owned commercial banks is monopolistic, which is bound to bring high returns; while the overseas financial capital investment is competitive, so the rate of return is bound to be fluctuated greatly. (Hongbin, 2008)

Moreover, CIC's overseas investment faces significant profit pressure. Firstly, the cost which Ministry of Finance used to issue special national debts to fund for CIC was borne by CIC itself, and its return rate was about 5%. Secondly, in 2007, the exchange rate of RMB against US dollars increased by 12%. This means that if CIC chooses RMB as the benchmark and wants its overseas investment to profit, the US dollars return rate should not be lower than 17% at least. This is not easy for CIC which lacks overseas investment experience.

[27] The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a voluntary private-sector organization, established in the United States, dedicated to providing guidance to executive management and governance entities on critical aspects of organizational governance, business ethics, internal control, enterprise risk management, fraud, and financial reporting. COSO has established a common internal control model against which companies and organizations may assess their control systems.

5.3 The SWOT Analysis of CIC

SWOT is an analytic method used to determine the company's own competitive strength, competitive weakness, opportunity and threats, and thus combines the company's strategy, internal resources and external environment together. Therefore, clearly identifying the company's resource strength and weakness and understanding the company's opportunities and challenges is very important for the company to determine the future development strategy to formulate an appropriate policy strategy.

5.3.1 The Analysis of CIC's competitive Strengths and Weaknesses

- **Strengths**

Compared with the general fund administrations, CIC has two Strengths which can help it avoid investment losses.

(1) A large fund scale fund which can effectively combine investments to disperse risks

CIC 200 billion U.S. dollars' registered capital will be completed by issuing special national debts, the total number of which is about 1.55 trillion RMB. Currently it has first issued 600 billion yuan of special national debts, and issued directly to the interbank market more than 100 billion yuan of special bonds. Such a large fund scale can make the CIC fully do its business so as to effectively diversify investment as possible as it can and design a diversified portfolio.

(2) The government paid attention to the CIC, so that it can get a wide range of supports

The establishment of CIC marks an important change in China's foreign exchange management system. It is government's exploration in managing foreign exchange from a conservative way to an active approach, and also the prelude to China's overseas capital operation. Therefore, CIC obtains a high attention from government and is bound to be supported all the way. All voices are actively exploring CIC's development strategy, giving scope to the free airing of views, which will help CIC learn widely from others' strong points in the making of corporate strategies.

- **Weaknesses**

Although CIC has a huge amount of investment funds, it is very young so that some weaknesses should be expected in its operations (Tan and Wang, 2007).

(1) Lack of skills and experiences in the capital operation

The primary challenge CIC faces is a lack of investment experience (Friedrich, Arfin, 2008). For CIC, the most typical example is undoubtedly the 3 billion U.S. dollars' investment in Blackstone, in which up to now the loss has been nearly 50%. There are also a number of IPO investments. Unfortunately, some of the IPO share prices have fallen below the issue price. In China, application for the new shares is generally considered risk-free, but for the unpredictable international financial markets, CIC does need time to learn.

(2) Large cost accompanied by exchange losses of RMB appreciation

As CIC's 200 billion U.S. dollars of capital comes from the 1.55 trillion RMB of special national debts issued by Ministry of Finance, CIC must bear the debt cost. The interest rate of the special national debt was 4.3% and 4.5% respectively. CIC must earn 300 million RMB every day to pay for the interest if counted by workdays.

Overseas historical experience has shown that large-scale overseas investment will not only face with pressure on investment income, but may also amplify the investment risk. In November 1983, the U.S. president Reagan visited Japan. He demanded that Japan open its financial market and capital market. Japan then, in

1984, gave up the yen conversion limitation. The foreign investment in Japan rapidly increased from 1.72 billion U.S. dollars in 1977 to 102 billion U.S. dollars in 1986. A lot of yen in overseas security investment once pushed up the prices of U.S. assets, and also increased the fluctuation risk in the market. On October 19, 1987, the U.S. stock market encountered the "Black Monday". Affected by this, the stock price plummeted when Tokyo stock market opened. The Nikkei 225 index fell 620 points, falling by 14.9%. The losses of the Tokyo stock market amounted to 480 billion U.S. dollars, accounting for 34% of the world losses.[28]

(3) Inadequate mechanism of human resources and risks

CIC needs more management personnel and first-line traders as well as a rigorous risk control mechanism to avoid operating failure caused by the accumulation of the systemic risk. Currently, CIC is establishing the internal control system of investment policy-makers and risk managers to build good corporate governance.

(4)The inadequate positioning

CIC established in China has exceeded its aim of all-covering investment with foreign exchanges. It is also responsible for the investment and management of state-owned banks. And the domestic investment is even larger than the foreign investments.

5.3.2 The Analysis of CIC's Opportunities and Threats

- **Opportunity**

Where there are risks, there are opportunities. Take the U.S. sub-prime crisis for example. It created a unique investment opportunity for CIC. HSBC is an international financial giant which suffered heavy losses in the sub-prime crisis. In addition to extracting huge amounts of NPL Provisioning and the reduction of

[28] Zhong Hua. *Remember the Lesson of Japanese Foreign direct Investment*, Securities Market Weekly, March 19, 2007

the net income, the share price also decreased sharply, causing a decline of estimated value in the bank. Although the stock prices were low, the profitability of HSBC continued to grow. The after-tax profit in the first half of 2007 was 10.895 billion U.S. dollars and was 25% more than that in 2006. According to the total market value of 215 billion U.S. dollars and the shareholder equity of 119.78 billion U.S. dollars at the end of June, 2007, the P/E ratio of HSBC shares were less than 10, and the P/B was only 1.79. In contrast, the P/E ratio and P/B of several Chinese state-owned banks which was listed both abroad and domestic were usually more than 30 and 5 respectively. Converted by this, the estimated value of HSBC was only 1/3 of that of state-owned banks. It can be seen from this that the current international price of large banks has been seriously underestimated, and experts recommend that CIC should invest in HSBC.[29]

- **Threat**

(1) The excessive market fluctuation

On one hand, influenced by the sub-prime crisis, the U.S. economy had a sign of recession, and the American Federal Reserve Committee dramatically reduced its interest, resulting in global capital market fluctuation and further making CIC's overseas investment more difficult. On the other hand, since CIC is a heavyweight market participant, the investment of it will largely influence the market. Sometimes, the market counteracts the CIC's act through the sale of assets whose value was pushed up by CIC. But sometimes, the market may also try to buy the assets that China wants to buy to carve up the profits of CIC in another way and strengthen its China's impact on the market at the same time.

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[29] Li Liming. *Experts Recommend Buying a Case of HSBC during the Subprime Crisis*, Economic Observer Online, November 26, 2007 see: http://www.eeo.com.cn/eeo/jjgcb/2007/11/26/ 88217.html

(2) The risk of exchange rate

CIC takes heavy exchange rate risks. RMB is expected to appreciate against the U.S. dollar by about 8% annually, while the bond interest it bears is approximately 5%. It means that CIC requires the rate of return should be 13% at least, excluding administrative costs.

(3) The political risk

The time when the world responded strongly to SWFs was in 2007, just when CIC was set up. In the same year, the advent of the sub-prime crisis made SWFs steal the limelight in Wall Street. At the same time, the China investment threat theory prevailed. SWFs have developed rapidly with a large scale. It is just because it is so secretive and manipulative that SWFs is naturally suspected since it was born. This is the reason why the threat theory will inevitably lead to financial protectionism (Devlin, 2007) and the great rescue for Wall Street today may lead to rebound in Washington in the future. According to different needs in different periods and different environments, the developed countries resist China SWFs to weaken the influence and profits of CIC.

5.3.3 The SWOT Analysis Model of CIC

From the above analysis, we can draw a conclusion that the SWOT analysis model of CIC is used to support the following systematic research on the investment strategy of CIC:

Internal Ability / External Factor	STRENGTH	WEAKNESS
	1.A large fund scale fund which can effectively combine investments to disperse risk 2.Paid attention to by the government so that it can get a wide range of supports	1. Lack of skills and experiences in the capital operation 2. Large cost accompanied by exchange losses of RMB appreciation 3. Inadequate mechanism of human resources and risks 4. The inadequate positioning
OPPORTUNITY	**SO**	**WO**
The USA sub-prime crisis caused the underestimation of quality stocks, which brings the best investment opportunity	Actively seeking for effective investment channels and diversifying the investment portfolio to reduce the investment risk	Entrust some external investment institutions to manage and operate some of funds
THREAT	**ST**	**WT**
1. The excessive market fluctuation 2.The risk of exchange rate 3. The political risk	1. Use the investment tools flexibly, and design investment products reasonably in order to avoid risk 2. Strengthen supervision	1. Clear investment objectives, design investment process riorously to ensure the rate of return 2. Introduction of top talent

Table 5 The SWOT Analysis Model of CIC

6. Some Suggestions on Improving the Investment Operation of China's SWF

China's establishment of SWF should not only achieve positive management to adapt to the trend of increasing foreign exchange reserves, but also prevent the threat theory of Chinese investment. So the task is arduous. Many countries have their own characteristics in the investment operation of SWFs. They have experienced the market test, and gained experience and lessons, which we should learn from. We also should pay attention to the differences between China and these countries, combine them with the actual situation and go our own way in SWFs. For the above-mentioned problems, I believe that the following suggestions to improve the investment operation of China's SWFs can be made:

6.1 The Establishment of Effective Investment Strategies

The sources of assets and organizational structure of CIC determine that it must implement a mixed investment strategy, with both strategic investments and portfolio investments which will disperse risk and gain high returns. In the premise of a unchanged organizational structure, they must seek for balance between strategic investments and portfolio investments in order to get higher returns, which is very difficult to achieve for the newly-established investment company. The better way is to build a more modern management structure, clear the stockholder's equity and separate portfolio investments from strategic investments, to give a more clear position for CIC and truly maximize the return on investment.

Firstly, the most effective way to maximize the return on investment is to establish a reasonable investment portfolio. The world's successful experiences have shown that diversified investment will get a better effect of dispersing risks and obtaining returns. Both GIC of Singapore and KIA of Kuwait are well-known SWFs. Their assets include a certain percentage of bonds, stocks, real estates, equity investments and other financial products, while other financial derivatives such as high-risk private equity funds and hedge funds etc. can also be appropriately considered. The specific ratio of its investment will be determined according to the situation. Now since there is no clear future in the financial market, we should not hold a bargain-hunting mentality and be eager to invest. On the contrary, we should take more emphasis on a more stable and steady investment strategy until the market is better. And then we can have high-risk investments and continuously adjust our strategies as the market changes. Secondly, CIC should make use of the international institutions' rating system to choose the species of its investment products, concern about industries and products which have greater developing potentials, pursue long-term returns in the current stage when the ability to operate the market is still not mature and also appoint an international investment institution to manage its assets so that it may save manpower and reduce losses.

Seeing from other countries' experiences in operating SWFs, entrusting an external investment agency to manage and operate the fund is a common practice. The investment way of CIC can be divided into self-operation and outsourcing. From the perspective of self-operation, CIC may invest in foreign bonds, foreign stocks, equities in strategic industries, energy and primary products etc. From the perspective of outsourcing, because of the restriction in investment experiences and talents, CIC can entrust some of the indexing investment products to internationally renowned asset management companies to operate. On one hand, this can guarantee rate of return; on the other hand this can learn investment experience from foreign countries. Then it may gradually increase the proportion of self-operation, and set up branches in international financial centers when it has a relatively large degree of self-operation and more experiences to better have overseas investment.

6.2 Human Resource Strategy and Improving Management Capacity

Optimizing the salary system and incentive to make it competitive in the market is good for introducing in investment management talents who is high-quality, familiar with international market and have international investment experience to make high-quality investment decisions. We should not only learn the successful investment mode of overseas SWFs, but more importantly, also learn the strategic vision of investment managers. The idea of "human-oriented" should be carried out in practical actions.

Currently, the overseas investment decision and daily investment management of CIC is charged by the seven-member committee. But the seven members still are national cadres at middle level, whose salary system do not have market competitiveness. And such a salary arrangement will hinder the development of CIC in the foreseeable future and will deeply influent its investment strategy.

Here the author suggests that in the setting of decision department of CIC, it can employ several well-experienced external directors. They are respectively responsible for market research, risk control, reward appraisal and so on. They use their market experience to balance internal judgment and strengthen the operating profession of CIC. Meanwhile, this is also good for reducing the international misgivings on CIC. As for salary setting, the basic salary should take international standard as reference, link the dividend payment to incomes, and give corresponding salary punishment when it makes a loss.

In various conditions of CIC, the rarest of its resources is professional talent, which is confirmed by the investment in the Blackstone Group in the early days of CIC. Here the so-called talents are a professional investment management team which is not only familiar with international financial market but also familiar with investment capacity of its own country; knows operations of enterprise management, investment skills and risk prevention etc. and is also can continuously research on the new international laws and regulations. Forming such a team can build a series of high-efficiency and steady investment decision system and also may help CIC avoid risks efficiently. But such a team can not be built in a short time. It can be built through internal training and external introduce. To train our country's investment team, we should strengthen investment practical ability and pay more attention to learning and summarizing foreign experience to form the investment concept and mode which fits China's situation. As for external introduce, we can introduce in foreign talents especially the homecoming person who has the experience of foreign capital operation, and we also can introduce in international investment organizations to do assets outsourcing, which can be a more steady investment method. At the same time, we should also strengthen international exchanges and communicate with international successful SWFs.

6.3 Strengthen Management and Control the Risk

Because of the fuzzy position in operation, contradictions existed in system and the multiple investment tasks of CIC, CIC faces greater risks than other countries' SWFs. Meanwhile, CIC also faces the international supervision requirement on SWFs, which makes it an urgent need to strengthen external supervision and internal risk controlling.

The foreign management experience holds a mirror to us. For example, the risk controlling of Singapore Temasek has a sound asset allocation and risk evaluation system. Executive Committee and Audit Committee under the Board of Directors carry out their own duties and are respectively responsible for the overall directions and specific checks on company management and financial conditions. For different kinds of risks, it also has different controlling methods. For example, for the financial risk, it requires that risk control department evaluates investment risk every month and evaluates the fund management company which it belongs to every day. But for operation risk, the Audit Office audits every department of the company every 18 months, and meanwhile, the legal department supervises other departments' law-abiding status.

At its early establishment, CIC designed a set of risk control system based on its own features: It determined its risk preference and risk tolerance, established risk budget and implemented overall risk management system and internal control system which is based on the internal controlling framework of COSO standard. It also established risk management organization system which included Executive Committee, Risk Management Committee, Chief Risk Officer, Risk Management Department, Legal & Compliance Department and other related departments. But its design was too vague, and the functional division of various departments was not so clear as other successful SWFs. What's more, its ability of risk measurement and evaluation is not sufficient, thus its effects of risk controlling are not so good according to practice.

Here the author recommends: in the early establishment of CIC, it can follow the way of Singaporean SWF which emphasizes more on inward disclosure than outward disclosure so that it can keep the balance between transparency and profitability. And I also suggest that we can continuously inject capital into CIC to increase the diversity of portfolio investments and reduce the strategic risk or market risk. In the early stage, we should focus on the low-risk assets to keep capital value rather than increase the value and gather experience to reduce operation risk. At the same time, we should strengthen supervision on the using of CIC's foreign exchange fund in overseas investment activities. These supervisions include: supervise whether the types and proportion of investment in the overseas is legal or not; whether the internal management system is established and robust; whether the risk control measure is clear and perfect. We should establish a risk supervision mechanism and management system which covers all the business process; establish early risk warning system and supervision index system to achieve the optimal allocation of risk and profit.

In the process of risk control, we should strengthen the evaluation level, well define power and responsibility and strengthen the function of legal department to make the investment activity meet the requirement on the domestic and foreign supervision. In external supervision, we should make full use of the bank and security supervision departments and regulate them through legal ways.

6.4 The Establishment of a Reasonable Performance Evaluation Index

CIC's mixed investment strategy determines that in the performance evaluation it may not take such a single assessment system aiming to target rate as Singapore GIC does. The multiple investment target of CIC also needs to have a comprehensive performance evaluation system for feedback. Therefore, the performance evaluation should be appraised from the performance evaluation index, risk control effect, social responsibility and so on. While setting an evaluation index, we should also first consider the accomplishment degree of expected rate of return. Meanwhile, we should design different indicators for different investment areas and fields to more accurately and fairly reflect the effect of the investment. KIC in Korea provides us the very experience. The investment reference standards of large-cap stock in American stock market is the S&P500 index, and in Canada it is the S&P/TSX Capped Composite index etc.. Of course, we cannot use the same evaluation method for different investment purposes. For example, rate of return is a way to assess investment portfolio but it is not suitable for strategic investment. The latter one can be examined from the perspective of investment management effect, such as stock equity scale and control power etc.. In the risk control, we can't only use returns or loss rate to measure risk control effect. Because some systematic risk can not be predicted and controlled, the evaluation of its effectiveness should take various factors to consideration. Of course, to some systematic risks, the effect of early warning mechanism also needs to be evaluated from their reaction speed and results of control etc.. Therefore, a comprehensive evaluation system is necessarily a feedback mechanism which reflects investment results from all directions and respects.

The performance evaluation index is oriented by the company's strategic position and target to keep the performance consistent with company's strategic position and be related to the implementation of the investment strategy. China's SWFs should set a feasible target rate of return. Because the high target rate of return will make managers excessively invest in high-risk assets to seek high return. Then they will undertake an excessive risk. But the low target rate of return might cause a problem of insufficient incentive and lead to a passive management.

CIC's performance evaluation index system should follow the principle of strategic position unity, comparability, dynamic, correlation and balance. Besides, while setting the index system, the company should combine the short-term effects with long-term effects. It has to consider the long-term benefit of investment, but doesn't cause any deficiency of company's performance evaluation due to its excessive emphasis on long-term income. Single evaluation should be combined with comprehensive evaluation. Since the investment strategy and investment behavior of CIC involve many different fields, in order to make it both has emphasis and comprehensiveness, it should both guarantee each index has its own unique content in performance evaluation and emphasis on the evaluation and avoid the defects in a single index evaluation while designing performance evaluation index. CIC should set a realistic rate of return target to seek a stable return instead of making a too high position when talents and risk management mechanism are still not perfect. For the whole investment group, it should make all efforts to realize the minimum yield smoothly.

CIC should establish different performance evaluation mechanism according to the domestic strategic investment business and overseas portfolio investment business; in addition, as for foreign portfolio investment business, CIC should invest in assets currencies, U.S. dollar currencies, and international currency basket (G3) to do asset performance evaluation. And also, it should evaluate independently on different assets (the reference standards should be stock index and bond index, etc.), and compare the rate of return with other international counterparts. It is best to take the dollar-denominated benchmark for the evaluation criteria, like Standard & Poor’s 500 index etc., which will exclude the impact of exchange rate appreciation, and has a more objective evaluation on the performance of overseas investments.

6.5 The Establishment of a Sound Legal and Regulation System

Nowadays all the countries in the world have formulated strict laws and regulations for foreign investments and foreign enterprises in anti-monopoly and information disclosure etc. And many countries also have special institutions to examine the investment transactions involving national security. To improve the transparency of fund operation is the rule that market participants have already followed. Because this can avoid the “herd behavior” of investment and the "contagion effects" of crisis, it is beneficial for each SWFs. China can accept a requirement on appropriately improving the transparency of fund operation.

No matter in Norway or Singapore, in the processes of the multi-level foreign exchange reserves management, they all put forward higher security and liquidity requirements in foreign exchange management and usage. They also created a complex decision-making mechanism and risk control mechanism, and cleared it by laws. In contrast, China only has a principle regulation in foreign exchange reserves management in article 4 and article 32 of *Laws on the People's Bank of China*. But as the basic regulation of foreign exchange reserves management, the *Regulations on Exchange Control* has no prescript in the operation of foreign exchange reserves. This fully showed that our regulations in foreign exchange reserves management are not perfect and need further complement. With the further development of SWF, our country can consider formulating specific laws and regulations on foreign exchange reserves management and operation, like the *State Foreign Investment Company Law*, to regulate the behavior of SWFs enterprise, clarify its responsibilities and improve the asset quality and investment benefit.

As a member of the international financial market, we should also actively participate in the setting of the SWFs rules (Garten, 2007), gain the initiative and strengthen the influence of developing countries while doing international investment and abiding by international regulations to obtain a more favorable international investment environment (Larsen, 2008 and Kimmitt 2008). To realize the equality and mutual benefit in real significance, we need to actively communicate with other SWFs, coordinate with the developed countries and international organizations and establish multi-lateral agreements and unified rules.

Reference

Aizenman, J., Glick, R.. *Sovereign Wealth Funds: Stumbling Blocks or Stepping Stones to Financial Globalization?* FRBSF Economic letter, Federal Reserve Bank of San Francisco (2007)

Aizemann, J. *Large Hoarding of International Reserves and the Emerging Global Economic Architecture.* NBER Working Paper 13277 (2007)

Andrew Lomax, *Sovereign Wealth Funds: The new Wealth of Nations.* Fleet Street letter (2007), p.23-26

Andrew Rozanov*, Who owns the wealth of nations?* Central Banking Journal (2005)

Anonymous. *Monitor Group Releases Seminal Report on Sovereign Wealth Funds.* Business Wire. New York (2008)

Ashby H. B. Monk, *Recasting the Sovereign Wealth Fund Debate: Trust, Legitimacy, and Goverance.* University of Oxford (2008)

Badian, Laura, Gregory Harrington. *The Politics of Sovereign Wealth: Global Financial Markets Enter A new Era*. The International Economy. (2008), p.52-84

Beck, R. and M. Fidora, *The Impact of Sovereign Wealth Funds on Global Financial Markets.* European Central Bank Occasional Paper Series (2008).

CIC, *Report on the Management of the Government's Portfolio for the Year 2007/08*

Daniel W. Drezner. *Sovereign Wealth Funds and The (In)Security of Global Finance.* Journal of International Affairs (2008) p.115-131

Davis B., *How Trade Talks Could Tame Sovereign Wealth Funds.* Wall Street Journal (2007), p.239-242

Devlin, W.,Brummitt, B., *A few sovereigns more: The Rise of Sovereign Wealth Funds*. Marcoeconomic Group, The Austrialian Treasury (2007), p119-136

Edwin M.Truman, *Sovereign Wealth Funds: The Need for Greater Transparency and Accountability*. Washington: Peterson Institute for International Economics (2007), p.36-38

Feng, Yuqing and Huo Qiu, *CIC committed not to control any company*. Chinese Business News (2008)

Friedrich Wu, Arifin. *China Investment Operation faces formidable Challenges*. China Business Review (2008)

Garten, J., *We need Rules for Sovereign Funds*. Fiancial Times (2007)

Gilson, R.J., Milhaupt, C.J., *Sovereign Wealth Funds and Corporate Governance: A Minimalist Response to the New Mercantilism*. Stanford University Law and Economics, Working Paper No. 355 and Columbia University Law and Economics, Working Paper No.328 (2008), p.1345-1369

Hammer, C., Kunzel, P., Petrova, I., *Sovereign Wealth Funds Current Institutional and Operational Practices.* IMF Working Paper (2008)

IMF. *Sovereign Wealth Funds –A Work Agenda*. IMF (2008), p.5-21

IMF. *Global Financial Stability Report*. Washington DC:IMF (2007)

John Gieve. *Sovereign Wealth Funds and Global imbalances*. London: Sovereign Wealth Management Conference (2008)

Kern, S., *Sovereign Wealth Funds: State Investment on the Rise*. Deutsch Bank Research (2007) p.1-20

Kimmitt, R.M., *Public Footprints in Privat Markets: Sovereign Wealth Funds and the World Economy.* Foreign Affairs (2008), p.119-130

Kimmitt, R.M., *In Praise of Foreign Investment: Best Practices for the Sovereign Wealth Funds.* The International Economy (2008), p.62-65

Larsen, P. T., *Call for SWFs to Agree Code of Conduct*. Financial Times (2008)

Li, Hongbin, *To calculate the Profit and Loss of Central Huijin and CIC* Southern Weekly (2008)

Li, Liming, CIC: *The Troubles Accompany with Growing*. The Economic Observer (2008)

Li Liming, *Experts Recommend Buying a Case of HSBC during the Subprime Crisis*, Economic Observer Online (2007)

Lowery Clay. *Sovereign Wealth Funds and the International Financial System.* Washington: Remarks at the Federal Reserve Bank of San Francisco's Conference on the Asian Financial Crisis Revisited, US Treasury (2007)

Lyons, G., *State Capitalism: the Rise of Sovereign Wealth Fund.* Thought Leadership, Standard Chartered (2007)

Magnus, G., *Sovereign Wealth Funds and the Rise of the 'Global South'.* The Globalist (2007), p.27-29

Martin A. Weiss. *Sovereign Wealth Funds: Background and Policy Issues for Congress.* Congressional Research Service Reports and Issue Briefs (2008), p.1-19

Miles D., Jen, S., *Sovereign Wealth Funds and Bond and Equity Prices.* Morgan Stanley Global Economic Forum (2007)

NBIM, *NBIM Quarterly Performance Report First quarter 2008* (2008)

NBIM; *NBIM Quarterly Report Q3* (2009)

Nicholas Brooks, *China's New Sovereign Wealth Fund: Implications for Global Asset Markets.* Henderson Global Investor (2007)

Owen Humpage, Michael Shenk, *Sovereign Wealth Funds.* Economic Trends (2007)

Philipp M. Hildebrand, *The Challenges of Sovereign Wealth Fund*. Swiss National Bank (2007)

Roland Beck, Michael Fidora, *The Impact of Sovereign Wealth Funds on Global Financial Markets.* European Central Bank (2008)

Sharpe, W. F., *Mutual Fund Performance*. Journal of Business (1966) p.119-138

Simon Johnson. *The Rise of Sovereign Wealth Funds*. Finance & Development (2007), p.56-57

Stephen Jen, *Full Depolyment of SWFs to Hurt Both USD and EUR*. Morgan Stanely Global Economic Forum (2007)

Stephen Jen, *How Big Could Sovereign Wealth Funds Be by 2015?* Morgan Stanley Research Global, (2007)

Stephen Jen, *Sovereign Wealth Funds: A new and growing Class of Funds.* Investment Management Journal, Morgan Stanley (2007), p.1-8

Stephen Jen, *Russia: The Newest Member of the 'SWF Club'.* Morgan Stanely Research Global (2007)

Stefan Schonberg. *Sovereign Wealth Alarm: Will the Big Sovereign Wealth Fund Surge Lead to European Protectionism?* The International Economy (2008), p.56-62.

Summers Lawrence. *Funds that Shake Capitalist Logic*, (2007)

Tan, L.H., Wang,J.Y., *Modeling an Effective Corporate Goverance System for China's Listed State-Owned Enterprises: Issues and Challenges in a Transitional Economy.* Journal of Corporate Law Studies (2007), Vol.7(1)

Temasek Holdings, *Risk & Opportunities Teamasek Review* (2008)

The Monetary and Capital Markets and Policy Development and Review Departments, *IMF Sovereign Wealth Funds — A Work Agenda* (2008)

The OECD Investment Committee, *The Report on Recipient Country Policies in Relation to SWFs.* Organization for Economic Co-operation and Development (2008)

Treynor, J.L., *How to Rate Management of Investment Funds*. Harvard Business Review (1965), p.63-75

Philip Whyte, Katinka Barysch. *What Should Europe Do about Sovereign Wealth Funds*? CER bulletin, issue 56 (2007)

William Miracky, Davis Dyer, Drosten Fisher. *Assessing the Risks: the behaviors of sovereign wealth funds in the global,* (2008)

Xin Zhiming, *CIC Aims for Overseas*. China Daily (2007)

Zhong Hua. *Remember the Lesson of Japanese Foreign direct Investment*, Securities Market Weekly, March 19, 2007

Internetquellen:

China Investment Corporation: http://www.china-inv.cn/cicen/

GIC: http://www.gic.com.sg/

International Monetary Fund: http://www.imf.org/external/

Morgan Stanley: http://www.morganstanley.com/

Norges Bank: http://www.norges-bank.no/

Norges Bank Investment Management: http://www.nbim.no/

Organisation for Economic Co-operation and Development (OECD): http://www.oecd.org/home/

SAFE Investment Company: http://www.huijin-inv.cn/

Sovereign Wealth Funds: http://www.sovereignwealthfundsnews.com/

Sovereign Wealth Fund Watch: http://www.sovereignwealthfundwatch.com/

SWF Institute: http://www.swfinstitute.org

Temasek Holdings: http://www.temasekholdings.com.sg/

Wikipedia:
http://en.wikipedia.org/wiki/Sovereign_wealth_fund
http://en.wikipedia.org/wiki/S%26P/TSX_60
http://en.wikipedia.org/wiki/S%26P/TSX_Composite_Index
http://en.wikipedia.org/wiki/S&P_Global_1200
http://en.wikipedia.org/wiki/S%26P500

Anhang 1

LEBENSLAUF

VORNAME: Xiao Ji

NACHNAME: Yang

GESCHLECHT: Weiblich

GEBURTSDATUM: 01.03.1983

FAMILIENSTAND: Ledig

STAATSBÜRGERSCHAFT: China

MUTTERSPRACHE: Chinesisch

FREMDSPRACHE: Deutsch, English

AUSBILDUNG:

1998-2001 die 19te Volkesschule der Wuhan

2001-2003 Hubei Industrie Universität

10.2005-02.2006 Vorstudienlehrgang der Universität Wien

03.2006-07.2010 Universität Wien

STUDIUM:

Internationale Betriebswirtschaft

Kernfach: Produktion und Logistik, Industrie Management, VWL, Marketing